The Harveian Lectures
ON
DISEASE, ITS TREATMENT AND THE PROFESSION OF MEDICINE IN 1899.

Delivered before the Harveian Society of London on Dec. 1st, 8th, and 15th, 1898,

BY WILLIAM EWART, M.D. CANTAB., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO ST. GEORGE'S HOSPITAL AND JOINT LECTURER ON MEDICINE TO THE MEDICAL SCHOOL; SENIOR PHYSICIAN TO THE BELGRAVE HOSPITAL FOR CHILDREN.

LECTURE II.[1]

Delivered on Dec. 8th.

THE MODERN ADVANCES IN TREATMENT AS THEY AFFECT THE PUBLIC AND THE PROFESSION.

Introduction.—Surgery and its Influence on Therapeutics.

GENTLEMEN,—I propose to-day to place before you: (1) the progress of therapeutics; (2) the means which they employ, including the supply of drugs and their use and the facilities for the treatment of the sick; (3) the general principles underlying our modern treatment; and (4) the attitude of the public and of the profession in relation to matters of treatment. The changes which have occurred in the treatment of disease are not inferior to the advances in pathology and one of the greatest is the extension of the clinical domain of surgery. Thus conservative surgery and visceral surgery, the diagnosis of disease by exploration, and its surgical treatment by direct manipulation, must occupy the foreground of any review of our recent progress. Surgical art may be said to have attained its ideal when the mechanical cure of disease becomes possible. Abdominal exploration is the most important of all the additions to our surgical resources, which also include the exploration of joints and the illumination of various internal cavities and their local treatment. Not many years ago lives were sacrificed daily to the impossibility of establishing the diagnosis of actual suppuration in the abdominal cavity. To operate on an abdomen where an extensive abscess had not yet formed did not enter the professional mind in those days and the idea of laparotomy for the sake of ascertaining that no abscess existed there was to it as foreign as are to us the thoughts of dwellers in distant planets. The whole anxiety was lest an operation should be attempted whilst pus had not been proved to exist. Most of the cases operated upon died because gangrene and suppuration had proceeded too far before they were revealed by physical signs. These fatalities are now the exception. Physicians have a further debt to acknowledge in the influence which surgical methods have exercised over medical therapeutics in the direction of definiteness in diagnosis and of thoroughness in treatment.

The medico-chirurgical idea in therapeutics.—The relation between the work of the physician and that of the surgeon is one of ever-increasing harmony. There can be no better surgeon than he who is also a physician, and the best physician is one with a practical knowledge of surgery. The division of labour between medical and surgical practice is therefore a necessity of the artist rather than of the art. The spirit of our treatment is becoming more and more identical to our mutual advantage. Hospital physicians find themselves day by day bestowing more time and thought upon the study of cases which it is given to others to cure and upon the discussion of methods which the surgeon may carry out. Some of this work and thought may perhaps not be wasted from a surgical standpoint, since in many cases our aim is to reduce the treatment to a surgical question. All specialists are also guided by the same medico-chirurgical idea, and it is given to some of them to carry it out in its entirety. The limitation of their field of work facilitates its cultivation in every direction, surgical as well as medical. Gynæcology, as it is now practised, is a microcosm of surgical and medical practice combined.

[1] Lecture I. was published in THE LANCET of Dec. 17th, 1898.

MEDICAL QUESTIONS OF TREATMENT; OUR THERAPEUTICS, PAST, PRESENT, AND FUTURE.

Turning to medicine we find a progress equally important though not so fully recognised and to this two opposite tendencies have contributed: scepticism, which led to the temporary adoption of the expectant treatment, to the gradual and permanent abandonment of irrational prescriptions, and to the recognition of *vis medicatrix naturæ;* and the experimental method applied to therapeutics, now a science in itself, that of pharmacology.

Scepticism in therapeutics.—For a blind belief in drugs and in systematic polypharmacy we must look back for more than 100 years. Scepticism had existed from earliest antiquity but it had never prevailed. Early in this century, however, there came a wave of scepticism stronger than any before. Strangely, homœopathy, while it shattered the old belief, made claims upon our credulity greater than any superstition. It failed to build up any lasting medicinal system though it called attention to some unutilised drugs and modified our opinion of the mode of action of some of the older ones; but the practical service which it did render was to direct attention to the importance of studying the resources of nature and of adapting diet to her requirements. Owing partly to this influence and chiefly to the scientific search for strict evidence of the alleged action of drugs expectant treatment became for a time the last word of medical art. Drugs were discredited and it was thought that the only safety lay in allowing nature free scope.

Rational treatment.—This paralysing form of scepticism is now dead. The advances in etiology and in diagnosis rapidly revived the hopefulness of the physician by directing his aims towards definite objects, whilst the doctrine of discouragement was soon forgotten by the patients with whom scepticism has never found much favour. Treatment having learnt to strike at the cause was henceforth to be styled rational. The action of the more potent remedies was recognised and studied, and the advantages originally due to empirical treatment were utilised once more and turned to better account. Physiology, as it threw more light upon the mechanism of the healthy functions, tended to explain their deviations and to suggest how these might be rectified. In this relation physiology is another word for preventive medicine and for hygiene and public health, subjects which ultimately found their place as specialities in our therapeutics, and to it is also due the elaboration of the physiological principles of treatment and of prevention. In presence of these definite results the scepticism of to-day is a very different one from any which had preceded. The efficacy of agents such as quinine, mercury, or iodide of potassium appeals to the common sense even of the believer in infinitesimals and the medical sceptics as to vaccination are an extinct race. Since the physiological effect of individual drugs has become matter of demonstration it is no longer the power of medicinal agents which is doubted by some, but the wisdom of utilising that power lest it prove to be a double-edged weapon, as in the case of the narcotics and of other drugs.

Symptomatic treatment.—But the majority, whilst recognising as paramount the rational treatment of the cause, feel no scruple in dealing with its manifestations. Favoured by closer clinical observation this tendency is now a leading feature in practical therapeutics. Each symptom becomes a fresh opening for treatment. Greater than any perhaps has been the influence of clinical thermometry which we owe to Wunderlich. The suppression of pyrexia, apart from its cause, has been pursued as a definite object. To name but a few other symptoms among the most important, insomnia, the neuralgiæ, increased pulse-tension, cardiac depression and excitement have been singled out for treatment by special drugs. Symptomatic treatment, however, could hardly have grown to its present importance but for the extraordinary supply of new remedies each possessed of some prominent virtue and therefore put forward as special remedies for separate symptoms. Chief among these groups of "symptomatic" drugs are the antipyretics, the hypnotics, the analgesics, the anti-spasmodics, the cardio-vascular depressants, and the cardiac stimulants. Whilst therapeutics themselves are becoming more rational an exclusively symptomatic treatment is increasingly patronised, often independently of the physician, by the public and by the pharmaceutist, and in this there is a danger.

Polypharmacy and monopharmacy.—Polypharmacy in its extreme form has had its day and monopharmacy is now gaining in favour. The combination of drugs—skilful, efficient,

and artistic—had been regarded as the highest fulfilment in practical therapeutics. Was this a fundamental mistake? The view that drugs may be of use severally in their different ways, although administered simultaneously, is countenanced by the beneficial results of a mixed diet, but this analogy illustrates also the detrimental effect of any excessive complication. Clinical observation also supports the belief that drugs may act beneficially even when combined and some of these combinations have received the practical sanction of experience—as, for instance, the combination of digitalis and strychnine or of digitalis and iron.

Monopharmacy, now in the ascendant, has lately been reduced to its simplest expression, the use of a single principle taking action upon a single morbid factor. But in a less exclusive degree of monopharmacy, that of the separate administration of any one vegetable drug, there is almost always something of polypharmacy since the various principles contained in each drug are often dissimilar in their action. This is shown in cases of idiosyncrasy by an intolerance for the drug, although some of its chemical constituents may be severally well borne. The isolation of the active principles of each drug and their separate administration represents a much more advanced stage of monopharmacy, the rapid development of which we owe to modern chemistry. This is from the standpoint of treatment by no means a final stage. Even when administered singly the isolated principles of drugs have multiple organs to act upon the organic functions of which may react differently to them; and as in the familiar instance of morphia the therapeutic dilemma is often how to help one of the functions without harming the others. It is now possible in some cases to single out the morbific agent as well as the remedial principle. This fulfilment is the fruit of bacteriology which has provided us with toxins and antitoxins addressing themselves directly to the cause of the disease.

Both methods are still prevalent.—Great as was this advance its sphere of operation remains limited and generally we have to employ less elemental agents. Not infrequently we are obliged to mix our principles after isolating them, as in the case of morphia and atropine and of iodide of potassium and arsenic, and some of us are guilty of even worse polypharmacy. Both tendencies are represented in our contemporary practice and in the growing supply of two opposite sets of pharmaceutical preparations. Pharmaceutical ingenuity has favoured the administration of separate drugs by wrapping up or compressing those which are unpalatable without the addition of any flavouring excipients. To such an extent has this facility been carried that the prescribing function of the physician and the dispensing function of the chemist have been appreciably restricted. On the other hand we are provided with compound medicines of great complexity which doubtless owe their popularity with the patients as well as with their advisers to the excellence of their form. This is a tribute to the usefulness of a well-planned polypharmacy and to its recognition by a large section of the profession.

The art of prescribing and its modern neglect.—The changes which these advances have wrought in professional practice are great and obvious. One of them—the growing neglect of individual prescribing—may be regarded as unfortunate. This neglect is at its origin traceable to the schools and the need for reform in this direction is urgent. If imperfectly trained in prescribing the young practitioner would the more easily take to the use of ready-made preparations. Push this tendency to an extreme and it would result that the art of prescribing would pass into other hands. Without sacrificing the convenience afforded by an improved supply of suitable compounds an effort might perhaps be made to educate the future practitioner to greater independence in selecting for himself his therapeutic agents. One of the advantages of personal prescribing is the opportunity afforded for adapting the remedies to the individual case and for constantly readjusting them to its changing needs. The worst form of polypharmacy is that which excludes variety. Change is the essence of symptomatic treatment and the art is to save fatigue and disgust for the patient whilst avoiding the cumulative action of drugs and their gradual loss of effect. The systematic rotation of drugs instead of their continuous administration may be suggested as a means of combining grateful variety with the maximum effect from the remedies prescribed. Opinion is divided as to the desirability of prescribing in the vernacular instead of in the old-fashioned Latin formulæ. This is one of our modern questions which deserves serious consideration. There are facts to guide us in the matter, but upon them I will not dwell.

Wholesale pharmacy and the question of dispensing.—The modern innovations in pharmacy have affected both the practising surgeon and the pharmaceutists. To those engaged in country practice there is a saving of time, of responsibility, and of extraneous assistance. The dispensing chemist is better trained now than he was, but his work is simplified and the skill of his craft less often required. There is also less of the practical handling of the crude drugs, and this affects the question of apprenticeship. The wholesale manufacture of simple drugs, such as tinctures, infusions, and others, was but the first step to the wholesale manufacture of compounds. The dispensing chemist's occupation is curtailed; but this is not all. Wholesale manufacture means cheapness of production and the coöperative supply has further reduced his opportunities. The operation of these causes is a factor in a troubled question which lies beyond the scope of our present subject.

The old drugs and the new.—New remedies of undoubted efficacy have been added in the later editions of the British Pharmacopœia and outside the Pharmacopœia there is a yet larger supply; most of them, however, are palliative rather than curative agents and not free from the dangers of habit and of overdosing. I can only allude in passing to the large and important subject of organ-therapy, the idea of which we owe to Brown-Séquard and the merits of which are still awaiting the verdict of experience. Some brilliant results have been achieved, in particular in the thyroid treatment of myxœdema, but there has been much disappointment in other directions. The supply of toxins and antitoxins is still in the safe keeping of experts. The germs of disease have not yet been let loose, but the recent experience in Vienna teaches a lesson not easily forgotten. The bulk of our recent remedies are coal-tar derivatives and their number is constantly growing. Most of them are administered for the sake of the sleep which they promote or of the pain which they subdue; but we are not sufficiently informed as to the effect which they may take upon the tissues and functions. Freely advertised and prescribed they have become known to the public and their unauthorised and irresponsible use by the laity is one of the peculiarities of our time which has variously told upon the public, the profession, and the pharmaceutical branch. Alcohol has long stood at the head of the list of poisonous drugs to which the public has unlimited access. Its value is undeniable, but more than any other it is prone to establish a habit which lessens its effect and brings into play its destructive properties. Happily it is falling into discredit as a therapeutic agent. In the most acute forms of disease such as pneumonia endocarditis, and in all conditions leading to exhaustion its free administration is indicated, but where the affection is subacute or chronic its continued use has rightly lost favour except as an addition to meals. The endeavour has been made from the side of total abstinence to show results equally good, if not better, from withholding alcohol even in the acute affections, but the suggestion based upon these observations has not so far obtained any general recognition.

Drug diseases.—Ether, morphine, cocaine, and the various hypnotics, anti-spasmodics, and anti-neuralgics, including antipyrin, antifebrin, and phenacetin, are the chief representatives of a dangerous group of drugs to which much injury to health is often due. Sudden seizures from an accidental overdose produce much alarm, though they may leave no permanent mischief. A greater evil is the gradual depression in health which may be induced by the daily use of some of these drugs. The weaker the patient the greater is his dependence upon the comfort which they confer; but their tendency is to confirm the neurotic habit, and the relief given to the pain is often the means of disguising its cause and of leading to delay in its being rationally treated.

THE CARE OF THE SICK.

Nursing.—The most important part of the physician's treatment is often that which is managed by proxy through his trained and efficient delegate and without her faithful coöperation the surgeon's operative skill might be in vain. From time immemorial the tending of the sick as a work of pure charity had been carried on by religious communities—by some of them as a special and sole object of their association—whilst the housing of the sick was provided by some of them and still continues to be—none better known to us than the sisters of charity who include within their ranks

women of high birth and education. But in this country it is within our own times that the science and art of nursing have risen to their high standard, combining the highest motives with the highest efficiency, thanks to the completeness and the discipline of hospital training and to the advanced teaching of the physician and the surgeon. But to Florence Nightingale our chief debt is due.

Hospitals and institutions.—A recognition of the advantages of hospital treatment not to be secured elsewhere except by the wealthy has led to the multiplication of hospitals for the relief of the poor who in this are better off than others, and also of paying institutions, where treatment is organised instead of having to be improvised and where professional services are not unrequited. For a large number of members of the middle-class who lead a solitary life or lack the necessary comfort nursing-homes of this sort are a necessity.

Isolation hospitals; notification and isolation.—The growing number of isolation hospitals and the strict notification of the acute infections are, from the standpoint of public health, improvements of unmixed advantage, but they tend to restrict the sphere of practice. For phthisis also a modified plan of isolation is being practically discussed. This is specially needed for the lower classes in our great towns and it is for them that suitable hospitals are mainly required. Private sanatoria for phthisis have long existed abroad in which the successful treatment of patients is assisted by constant care and supervision, but hitherto we had only had hospitals in the heart of towns where the modern treatment by open air is not provided. We are now to imitate the example of Germany and to provide homes for the less affluent among the middle class where modern methods can be applied, including the discipline which is necessary, though it may be felt to be more irksome in this country where every man is a king. Our greater task, however, concerns the masses whose aggregate of mortality from phthisis runs to very high figures. The only efficient way to protect the families of the poor is to remove the dangerous patients from their midst to sanatoria where the risk of infection can be fully controlled. The time may soon come when each large city is provided with suitable country isolation hospitals for phthisis. Our climate is proverbially unstable, but I believe that the tempering of the bleak winds is a problem which is not insolvable if the advantages of suitable site and soil and of adequate protection can be secured. Action of this sort which is now contemplated in Liverpool and elsewhere will lead the educated to greater carefulness in the limitation of the infection without any resort to notification or segregation.

The hospital question.—Are the really poor to be the only privileged ones in obtaining hospital treatment and nursing? Are these privileges to be denied to a much larger class who, whilst able humbly to contribute towards the hospital funds, cannot purchase the analogous facilities offered in private homes? To deny to some of those who are quite unable to secure it elsewhere by payment the attendance which is desired and to offer it free of all charge to a lower stratum of poverty would seem to be an uneven dispensation of charity. These difficulties are better known to those who administer than to those who support our hospitals. So long as there are no nursing homes for the poorer middle class where payments can be adapted to the means of each, patients possessing no social or financial claim to gratuitous treatment will occasionally be sent to our hospitals by their own medical attendants.

GENERAL THERAPEUTICS.

As a slight contribution to practical therapeutics I propose to consider briefly some of the broad principles which guide our treatment. A clearer insight into the mechanism of disease has infused greater directness into our methods. Modern physiology has taught us even more than pathology. But we have learnt most, perhaps, from watching in animals and in man the process of spontaneous recovery. These lessons are bearing their fruit. We do not despise the welcome aid of drugs and the opportune placebo, but we have turned to the cultivation of those forces which Nature herself supplies. How different this conception from the old idea that disease was a thing to be starved out of existence, strangled by violent remedies, or made to escape with profuse discharges of serum or of blood. No longer do we see the bleeding of the old days when, because it was spring or autumn, rich and poor flocked to the apothecary to be bled to the point of fainting. There was occasional good in bloodletting and in certain conditions of disease it is now being revived. It was its immoderate use which was so baneful. Our method differs entirely from that of the expectant treatment. Nature cannot always be safely left to herself. Interference, to use the word in an invidious sense, is to be avoided; but our intervention is often indispensable—as, for instance, when chronic obstructions finally lead to a deadlock. This deadlock is the climax of a long continuance of faulty or imperfect function. Long before the crisis the need for intervention existed and the height of our art consists in its timely recognition.

The physiological principles of treatment.—Among the therapeutic agencies suggested by physiology some of the most important are: rest and sleep, activity and energy, habit and change, and physiological rest.

Rest and sleep.—No amount of simple rest of the body can do duty for sleep. Though mere repose may partly satisfy the needs of our vegetative life, sleep alone, that profound sleep which the poet has likened to death, can make good the wear and tear of the higher nervous centres. The difference between individuals in all that relates to sleep is remarkable and would well repay systematic study. Whilst a minimum of sleep is requisite for all there are great varieties as regards the duration and the quality of sleep, and in all of us these are greatly influenced by habit and education. It is the privilege of some to command sleep at any moment, but it is probably exceptional to combine this facility with that of remaining awake at will—a dangerous power when it is abused. Some possess the opposite peculiarity and are subject to the invincible desire for sleep after a definite expenditure of nerve energy. By this they are protected against exhaustion. Interesting physiological speculations, and some practical notions also, are suggested by the remarkable relief and freshness which they derive from even a very short period of sleep. Much tissue repair cannot have taken place during those few minutes of profound sleep which will restore a jaded man to full activity. The energy which he subsequently develops must have been there when he fell asleep, yet it was unavailable. It is therefore clear that these brief and irresistible slumbers are essentially different from the long sleep of the night and that we might turn both the short and the long sleep to separate therapeutic account.

The therapeutic value of sleep and of hypnotics.—Hypnotism, in the sense of a systematic method of animal fascination, does not form part of the present subject. Although it has been given an extensive trial by French neurologists it has never found much favour with us. In some of its applications, though not in all of them, it is one of those extra-physiological, not to say anti-physiological, methods which seek delusive results by fostering a weakness which it should be our duty to combat. Legitimate sleep which strengthens volition together with the rest of our faculties has not yet received the full amount of study which it deserves. Our practical knowledge of the relative value of our many hypnotics is also in a rudimentary stage. In the waking state the effect taken by our various drugs upon the nervous system is manifestly different. Similar differences may obtain during sleep between the actions of the various hypnotics. The sleep which they severally procure is probably not, as we may have assumed, an identical quantity. Differences in its duration and in the varying delay of its onset must have struck the least observant; but its quality must vary quite as much as we find it varying in the absence of any drugs.

The various degrees of sleep as they range from coma, where both the nerve cells and the conducting fibres are absolutely impervious, to the light sleep of those whose irritable and quick nerve protoplasm is immediately thrown by the touch of a feather or by the slightest sound into that state which means open conduction and full consciousness, there is every shade of quality. The disordered cerebration of delirium and of dreams almost suggest a possibility that orderly communications may pass between local groups of cells, and this might perhaps explain the good counsel which is bred of the night. But these incubations would be merely local settlings of the balance of the day between cells disciplined to collaboration and would be during sound sleep incapable of a wide diffusion throughout the mental sphere.

Long sleeps and short sleeps.—Sleep then would seem to have two offices, both fulfilled in the long sleep of the night which it is our usual endeavour to secure for our patients—

viz., that of favouring the slow anabolic changes of repair and that of interrupting consciousness by uncoupling the chain of neurons or conceivably by relaxing protoplasmic tension or tone. This relief of tension is it would seem the only office performed by the shorter spells of sleep and therefore the two forms of sleep suggest two therapeutic objects.

The night's sleep may come without any drugs, but it might need even then to be bettered, and in improving the quality of spontaneous sleep our help is often of value. It might also need to be prolonged.

The systematic prolongation of sleep for the cure of disease is one of our opportunities hitherto little used. In chorea sleep entirely subdues the muscular agitation and this observation has led to the attempt to arrest the disease by prolonging the sleep for considerable periods. A complication arises in connexion with alimentation which in this disease, as in most other nervous troubles, is of primary importance. Partly for this reason, and because more than rest may be needed for a cure, the results hitherto reported have not sufficiently recommended the method. Prolonged narcosis has also been suggested on the principle of physiological rest in excessive wear and tear of the nervous system. In various nervous affections, including the mental, its renewed trial, combined with suitable methods of feeding, might lead to encouraging results. Better suited perhaps to our every-day needs is a systematic resort to the *shorter sleep*. Like the light instalments of food which restore the lost function of appetite and digestion, short sleep in the day may be essential to the cure of nocturnal insomnia. Our growing wealth in hypnotics warrants a hope that a suitable agent may yet be found which in that direction would minister to the health of the invalid and might command the luxury of sleep at any opportune time for the convenience of the worker.

Body rest as a systematic therapeutic agent has long found its place in our modern treatment for patients whom weakness alone, in the absence of medical advice, would not have compelled to take to their bed. To that class belong the frail women in whom the debility of anæmia, of dyspepsia, and of over-fatigue develops symptoms often mistaken for hysteria. Rest in bed is their first need. In the treatment of chlorosis this is now recognised as the essential element for a rapid recovery. Again, its methodical employment forms an essential part of the Weir-Mitchell plan, but its most striking instance is that of the open-air rest cure for phthisis which within quite recent years has largely replaced at foreign sanatoria the previous method by muscular exercise. The pendulum of medical opinion has swung towards the principle of physiological rest and it is claimed with much reason for this plan, which is combined with liberal alimentation, that rest is essential to the cure of the pulmonary lesions and does good by allaying the characteristic irritability so well displayed in the pyrexia occasioned by exercise or excitement. The prolongation of rest for the muscles over extensive periods cannot fail to occasion some atrophy of the muscular system and of the heart itself. This consideration has led to the mitigation of the rest cure both as regards its duration and its absolute character, and in suitable cases graduated exercise both passive and active and other hygienic methods have been adopted as part of this treatment in its most recent developments.

PHYSIOLOGICAL REST TO THE ORGANS—ABSOLUTE AND RELATIVE.

The efficacy of rest, so ably set forth from a surgical standpoint by John Hilton in his lectures on Rest and Pain (1861–62) as part of our natural therapeutics, has now obtained full recognition in connexion with the organic functions. Its principles are applicable to them. Rest which in the vegetable kingdom is a condition of growth and of repair is a still more prominent factor in the daily visceral life of animals.

Absolute physiological rest to organs is sometimes provided by modern surgery, as in the case of the larynx in tracheotomy, of the rectum in colotomy, of the œsophagus in gastrostomy, and of the pylorus in gastro-jejunostomy. In medical treatment the same principle has received free acceptance, but there has been little scope for its use which has remained almost restricted to the nervous, the muscular, and the alimentary systems.

Rest to the stomach.—Absolute physiological rest of one of our organs can only be secured by deeply interfering with another, sometimes to the extent of reversing its functions. The most striking instance in point is that of the complete suspension of gastric alimentation with the help of rectal feeding. So far as it secures physiological rest to the stomach the result is satisfactory, but at first sight the method is unphysiological. We turn the rectum, an excretory organ, into a channel for absorption. A similar readjustment and reversal of functions is sometimes seen in disease as in the case of the lymphatic system. When the kidney refuses service the function of absorption peculiar to the lymphatics is apt to be reversed. The lymphatic system may then become a reservoir and ultimately, if ulceration of the skin should occur, a channel of excretion for superfluous fluid and for the solids dissolved in it. These facts carry suggestions which some day may be more widely utilised.

Partial physiological rest is much more easily applied in medical treatment and we spend our lives preaching the lesson of moderation, but specially in the direction of the nervous and of the alimentary system. It is perhaps a redeeming feature of illness in general, but more particularly of enteric fever, when it strikes down the middle-aged man that it affords his overworked nervous system a prolonged and timely rest. If the renovation of tissues which is one of the results of a consuming fever were an unqualified advantage, then the Lenten fast and the more extraordinary fasts of certain professionals might claim some foundation in science. More probably, however, the favourable result which is often observed in the convalescent from typhoid fever is the effect of the prolonged rest of many functions, including those of the stomach and of the liver, but more especially of the nervous system. When convalescence is happily conducted the sufferer may find himself a new man, disencumbered and refreshed, with a more active stream of nutrition which reminds him of younger days. But we need no lesson from illness. Our treatment of the nervous system by rest is sufficiently confirmed by its results. Again, in connexion with the alimentary system the advantages of partial rest are evident as in that wholesome cure for the prevalent results of abuse of food as a mere stimulant—an exclusive milk diet combined with rest in bed. Who has not been struck with the singular contrast between the frugal diet, often small in bulk, of hard-working labourers and the weight and superfluous richness of that of the unemployed? With the latter the labour is visceral and the penalty as well, and their life is mainly shortened by this organic overwork of stomach, liver, and kidney. In vain has modern fashion endeavoured to lengthen the intervals between meals by deferring the midday feast and throwing back the late dinner nearly to the hour which summoned our forefathers to bed. An additional afternoon meal has crept in between them and the early cup of tea before rising also belongs nowadays to elementary hospitality. The least the stomach can claim is that its digestions should not overlap. Unfortunately even its single opportunity, the long rest of the night, is too often encroached upon and a meal of indigestibles thrown in at 12 or 1. Half this amount of food would keep a man in strong work; the idle, even if they be strong, must break down under its weight. Alone the dyspeptic is safe whose constitutional weakness acts as a merciful protection. Physiological rest in this direction is much needed.

HABIT AND CHANGE.

The same principle lies at the root of these opposite agencies. Habit and change are both conservative and their influence in saving energy is most marked in connexion with the nervous and the alimentary system.

Change of scene, change of rest, and change of occupation are all beneficial for the nervous; but it is neither the scene nor the rest nor the work, but the change that does most good. Most often the machine is suffering rather than the energy and it suffers in those parts which have long borne the same recurring strain. Let other cerebral districts be laid under contribution and the overworked areas will obtain their physiological rest. Work in this way becomes productive of rest. Greater still is the relief when mental occupation is exchanged for that which is purely mechanical, and this is part of the secret of the relief to brain fatigue conferred by muscular exercise, which also alters the rate and quality of the metabolism. In the alimentary system analogous benefits are derived from change and the same is also true of our medicines, which it may be wise to alter for the sake of variety and in the hope that a return to the original prescription may be followed by a renewal of its original benefits.

Habit differs from change in the field of its usefulness, but is not far behind it in economising fatigue and in sparing effort. The value of habit lies in the easier performance of those things which are in themselves healthful, whilst change is sovereign in breaking a deleterious succession. Regularity of life and much abused routine will long resist the wearing effect of time and to the well-rooted habit of living many a veteran has owed his ample years.

The cultivation of habit as influencing nutrition.—Habit is intimately connected with rhythm and with the establishment of paths of lessened resistance by constant repetition. It has been alleged that since function is after all the concerted action of many individual cells the education of habit might be regarded as the education of the cells themselves and that we might thus trace its existence and development down the scale of functions, of organs and of tissues, to the cells as a determining influence in their growth and characters. Without holding opinions so advanced we perceive in the vaso-motor system and in its reactions endless instances of the influence of habit upon functions and of the reaction of rhythmic functions upon cells. Leaving aside all theory we may award a place among our modern principles of treatment to the cultivation of habit as a means of influencing intimate nutrition. To put the matter in a more concrete form a life without effort or excitement would do little towards educating any higher habit but would tend towards disuse of function and degeneracy of cells, whilst sufficient training both of the mental and of the muscular activities, to say nothing of the visceral, would be capable of educating certain attitudes of the vessels and of the tissues which they feed and of keeping up above all the habit of muscular and elastic response. This question verges dangerously upon the vexed limits between physiology and pathology. Atheroma has been generally attributed to overwork and overstrain. I have never been able to satisfy myself that this is in every point a rational explanation; at any rate, relative defect or stagnation of nutrition and abeyance of function appear to be dangers not less real which may threaten the vitality of the vessel wall.

FUNCTIONAL ACTIVITY AS A PHYSIOLOGICAL PRINCIPLE OF TREATMENT.

Atony, delayed nutrition, and atrophy are the dangers of rest. Activity and function are the chief stimulants of nutrition. The tendency of properly regulated activity is to strengthen function just as it tends to hypertrophy the tissues. Both muscle and nerve and the body at large are "toned up" by activity and their nutrition is increased. In this total effect there is a reciprocity between the periphery and the centre. Powerful innervation favours the peripheral mechanisms, but we cannot doubt that the nerve centres derive assistance from the work and the tone at the periphery. Upon this principle may be founded a systematic education of the brain by the education of the peripheral mechanisms and particularly of the hand. This principle has considerable application in the treatment of backward children and in many others whose aptitude is at first rather mechanical than towards the abstract. Conversely, we have abundant instances of a central education of muscle in the marvellous dexterity attained in various arts. Concentration of thought and mental effort upon the contracting muscles, as in the modern training of athletes, is also an instance in point. The bringing into play of the function which has been rested is the most important part of the treatment by rest. Passive and active movement and graduated muscular effort are now resorted to in the treatment of a variety of conditions. Many sufferers, particularly those affected with chronic disease, are treated largely out of bed who were formerly confined to absolute inertia. The healthy heart itself is our best exponent of the great principles of rest and activity. In health cardiac rest is actually apportioned to cardiac work. In the treatment of cardiac disease the share of rest is a very large one and until recent times it was almost an exclusive share, but our principles have undergone considerable alteration. Whilst in phthisis the latest endeavour has been to keep the lungs at rest the prevailing tendency of cardiac treatment is now to gradually train the heart for action. The modern methods identified with the names of Oertel and of Schott are so well known to you that their mention will suffice.

THE RESERVES OF FUNCTION AND THE PRODUCTION OF ENERGY.

Towards the fatal termination of chronic disease our remedies are in vain. For a long time waste has been in excess of repair until at last the function of the higher organs ceases from want of a sufficient supply of force from the exhausted cells whence it should arise. In acute disease the issue of the struggle for life depends upon the amount of work still to be got from the vital organs in spite of the exhaustion which their cells may already have suffered. Organs which prior to its onset were only just equal to the demands of healthy life would break down for want of any available reserve of power. Energy in a general sense is the relative organic capacity for supplying force, and this supply may, as suggested, be inferior, equal, or superior to any special requirement. It may now be stated with less risk of misunderstanding that our first therapeutic desideratum in resisting disease is a margin or reserve of energy. Much energy is latent and may require some extraordinary stimulus to bring it into action. We are all familiar with the surprising amount of muscular work obtained in excess of that which ordinary volition will command under the influence of anger, alarm, or suggestion, even in those who are habitually torpid. In the "energetic" the capacity for work and its actual amount are manifest and this brings out the particular meaning of the word "energy" as used in current language. It is the capacity for work of the nervous system in its office of animating the entire assemblage of functions, organs, and cells. Inasmuch as it raises the energy and calls forth the work of the several organs, energy, understood in this limited sense, is itself a function and as such capable of education. That which is true of this central and ubiquitous function is equally true of the organs, each of which can be trained by special attention and acquires thereby that structural increase which is the basis of energy and the storehouse of force. Likewise we cannot doubt that hypertrophy and strength of the nervous elements must be the result of their constant use.

The question "Can energy be manufactured?" is therefore perhaps not so absurd as it may sound at first. The feeble primordial cell contains little more than the vitality of the future Cæsar—all the rest is imported. Food will bring the stuff upon which energy will grow, and yet how easily under unsuitable circumstances may food itself extinguish it. The growth of energy during the development of the organism may be raised or depressed in the measure as function is promoted or prevented. Its originally rich promise will avail nothing if its development be arrested by disuse. And its neglect or cultivation will react upon vitality itself and longevity. The growth of effective energy might be regarded as proportionate to the abundance and to the degree of the various organic activities set up between functions—in other words, their mutual stimulations. And if this be correct a judicious training of organs is essential. Active workers, whether with muscle or brain, are aware of the vitalising effect of habitual activity. In conclusion, it would appear that whilst the energy of the organs and of the organism may be suppressed it may be systematically raised, and this is our practical function against the chances of future disease, when the reserve of organic energy is to be the deciding point. Considerable inequalities under similar environment are observed between individuals even as regards the facility for production of the energising stimulations to which reference has been made. In some, apparently deficient in energy, a suitable change in the circumstances or environment may bring into play the increased scale of stimulation which the ordinary environment in the case of that individual had failed to afford. Instances of this apparent manufacture of energy by function is afforded by the special education of imperfect intellects, as at Earlswood—by the gradual vitalising process applied to torpid subjects—and by the more difficult treatment of neurasthenia.

PHYSICAL EDUCATION FOR MEN AND WOMEN.

A great outcry has arisen of late against the excessive importance attached to athletics at schools, at the universities, and at our medical schools, and in the columns of the daily press. The facts may partially justify the criticism. Perhaps a less severe view might be taken of the matter. In this age of unrest and of nervous strain there is little prospect of any slackening of the speed. Some of the consequences of this excessive nervous expenditure have already been noted—neurasthenic affections, insanity, general paralysis, premature senility, and a diminished birth-rate are partly attributable to this cause. The best corrective is probably a more general adoption of muscular exercise as part of our daily life. Muscular exercise, it is alleged, delays the

passing of examinations, not only by consuming time, but by dulling the brain. For my part I would not discourage athleticism in our pupils, for we are all familiar with the excellent results arising from a happy combination of sport and study.

Men in this country have always been athletes and sportsmen. There is, however, something new and to be watched with interest in the spreading cultivation of physical exercise by women. The female world has perhaps never been so much addicted to athletics as in the present day. It has been reserved for our own time to extend to a larger circle sports and games which are the more healthy because enjoyed in the open air. Croquet, lawn tennis, golf, and the bicycle have been the progressive stages through which this development has passed. Among these pursuits the bicycle has done more than any other to revolutionise the formerly so carefully measured tenor of feminine existence, and coming into favour in the declining years of the century it has by some been held responsible for some of its many changes. So considerable a revolution cannot be left unnoticed in its medical aspects. The first outcry against its alleged detriments is already subsiding and even specialists have not condemned it. Muscular exercise is a cure for nerve overstrain and irritation and we can point to its favourable results. Young women are growing up to a greater stature and weight, with better complexions and healthier nerves, than had been witnessed before. These considerations open a wide subject. The health of the people is of no less moment and for them little has hitherto been done. If the improvement to which I have referred is not an imaginary one it should be shared by the millions. One of our most urgent duties will be the provision for the poorer girls of adequate means of healthy exercise. Hard work they get in our great towns, but exhilarating exercise is unknown to them. A praiseworthy movement has been set on foot under the presidency of the Earl of Meath and a British college of physical education was founded in 1891 and incorporated in 1897. This may become the nucleus of a widespread movement which might end in branches being attached to every school in the country.

THE PUBLIC AND THE PROFESSION.

I have anticipated in my first lecture some of the remarks which belong to this part of my subject and I have hinted at the increasing curiosity of the public in matters medical. In some ways the public is more exacting than it was. This is largely due to the increased publicity of information which was formerly regarded as strictly professional. One result is that an opinion is demanded in many cases where it would be wise to keep the diagnosis from the patient. But there is a growing difficulty arising from the modern facilities for communication by the post, by the telegraph, and by the telephone. Although so much versed in medical affairs, in one particular the laity are not sufficiently informed as to their working. Patients do not always realise that letters can kill. Advice and explanation are easily asked for. It does not strike the inquirer that for two minutes spent over such a message he expects the sacrifice of much time and labour from an overworked man who, let alone any much-needed relaxation, has not time for some of the most urgent requirements and the assumption by him of the anxious responsibility of hurried writings which nothing would tempt him voluntarily to undertake. It were well if the public were enlightened in this matter.

Treatment without advice and advice without treatment.—I need not refer to the number of periodicals addressed to the public, and particularly to the masses, in which professional matters are discussed and professional advice is offered by the editor or his correspondents. In this way many to their detriment resort to treatment without professional advice and the various consequences to which this leads are well known. They affect the practice of medicine and the practitioner. His opinion is not always regarded as the last word on the subject but the patient's and friends' first impulse is often to question it and to seek further advice. And thus the patient is becoming an unstable entity, more owing to our *fin-de-siècle* restlessness than to any blame attached to the medical attendant. The medical attendant himself is much discussed, but the criticism of treatment is a more serious matter because it affects the patient's interest. Some patients discuss it with their friends. Others are more inclined to read the most recent books on the subject and frequently are depressed and made worse by their efforts. Systematic serial consultations are one of the results based upon the deep-rooted conviction that medical men differ. This leads to much practice and is the chief column of support for the consulting fraternity. The consequence of this is that many go from one authority to another getting excellent advice; but the treatment cannot be established on any firm or consistent basis and but few of the things recommended are ultimately carried out. This is the other evil—that of advice without treatment.

ABSTRACT OF

The Morison Lectures

ON

THE RELATION OF THE NERVOUS SYSTEM TO DISEASE AND DISORDER IN THE VISCERA.

Delivered before the Royal College of Physicians of Edinburgh on Nov. 7th, 9th, and 11th, 1898,

BY ALEXANDER MORISON, M.D., F.R.C.P. EDIN.,

PHYSICIAN TO OUT-PATIENTS AT THE GREAT NORTHERN CENTRAL HOSPITAL AND CHILDREN'S HOSPITAL, PADDINGTON-GREEN.

LECTURE II.[1]

Delivered on Nov. 9th.

DISORDERS OF VISCERAL SENSIBILITY.

SIR JOHN TUKE AND FELLOWS,—It may be remembered that when discussing some points in the physiology of the visceral nervous system last year I drew a parallel between viscero-motor actions in general and cardio-motor action in particular, arguing that while the products of such motions differed with the organs which were the seat of motion the mechanism of such action, whether anabolic or katabolic, was essentially the same. It is possible in Protean nature to push a parallel too far and I have no desire to become too general in discussion. But it appears to me that it will be convenient in considering the relation of the nervous system to disease and disorder in the viscera to divide these into two large categories—namely, into disorders of sensibility or sensation and into disorders of motility or motion. The brain could no doubt be thus considered collectively with the other viscera, but there is a certain difference between the former and the latter which, together with the special character of this lectureship, renders it desirable that that viscus should receive separate treatment. There is, indeed, throughout the body, as there is in every organ, a functional unity which might be more accurately termed a tri-unity due to the consentaneous operation for the production of a common result of the peripheral organic cell, whether in brain or muscle, a central regulating cell and its nerve channels, and the bond of union between the two—namely, the blood with its stimulating and life-giving properties. Recent physiological thought appears rather to have dissociated this essential unity and much ingenuity has been exerted to show how very well the organs can get on without the nervous system. The question of non-neural cardiac rhythmicality was touched upon last year and I traced the controversy from the now untenable assertion of an absence of nerves in general in the cardiac apex to that of an absence of ganglion cells in particular in that portion of the organ. Personally, I endorse Henry J. Berkley's physiological standpoint, although I cannot agree with his description of the cardiac ganglion. His words are, "Cajal in portraying the Auerbach plexus by the vital blue method gives a picture that is not entirely dissimilar to our cardiac nerve plexus with the neural enlargements and nerve-cells, though in the cardiac plexus the nerve cells are vastly inferior in number, different in appearance, and do not occur in clusters; yet the general likeness is sufficient to allow of some comparison being drawn between the two."[2] This is fairly correct as regards

[1] Lecture I. was published in THE LANCET of Dec. 17th, 1898.
[2] The Johns Hopkins Hospital Reports, 1894, p. 89.

the lower third of the heart which Berkley examined and I shall show some of those ganglia of the apex which agree in great measure with this description. But in applying his words to cardiac ganglia generally Berkley's description does not apply. As I demonstrated last year the cardiac ganglia of the vagal system, as I take them to be, may consist of very large clusters of cells such as the fine specimen I now show on the screen and which was figured in THE LANCET and *Edinburgh Medical Journal* for 1898. My reason for regarding such ganglia as pertaining to the vagal system is that they bear much the same relation to the peripheral distribution of the nerve that the plexiform ganglion does to it at its origin and they are to be met with in many of the organs to which the vagus is distributed. The important point, however, is that, character apart, the apex of the heart although not profusely is nevertheless sufficiently ganglionated and the Hallerist must look for some other support than his anatomical argument. Physiology affords more scope to the imagination. But we saw that the presence or absence of ganglionic cells was after all a matter of small moment to the Hallerist. They were nutrient or something else. In any case they had little to do with motion in any organ. You cut a vagus and the heart does not feel it long. You detach an organ and stimulate it and the functional result is there. It has been shown, however, that if you cut both vagi the staying power of the heart is seriously compromised. Balint has shown that if aortic regurgitation be artificially established and one vagus cut the action of the heart is not materially interfered with—the compensated organ continues to act efficiently—but that if both vagi be divided the heart, even although it has undergone compensatory hypertrophy, soon gives out and the animal dies in about a week with well-marked evidences of retrograde stasis. Survival after the division of one nerve is probably the result of what may be termed incomplete peripheral decussation in the organic plexus—a subject, as it appears to me, of much practical interest and one which I have examined somewhat, but my results are still too rudimentary for publication. The nerve from one side probably sends fibres to both sides in such unified organs as the heart, while division of both nerves naturally destroys such a nerve-supply and saps the fountains of persistent rhythmicality.

Inasmuch, however, as anatomy lies at the foundation of our knowledge of all forms of organic activity it would have been a difficult matter for the adherents of a neural theory of sustained motion to have defended their position had it been possible to point indubitably to mobile structure which continued efficiently to act for a lifetime without such endowment. The conception of such a condition would *a priori* seem unreasonable, but as the unexpected does occasionally happen it was just possible that such a fact might conveniently come to the aid of the distressed Hallerist. This was supposed to be so in the case of the intracranial vessels. Some of the peculiarities of the intracranial circulation certainly appear at first blush to lend probability to the occurrence of an exceptional condition in this sphere. The resistant skull-cap, Alexander Monro the second's suggestion of the full bottle held upside down without spilling its contents, Kellie's well-known experiments, and much argument founded thereon suggested that vasomotor nerves had little to do with the intracranial circulation. Some, like Hill and Bayliss,[3] argued that nerves were absent because they had not been found and for the purposes of their theory it was necessary to assume such absence. In my ignorance I had assumed that these vessels were innervated until Sir John Tuke informed me last year that they were supposed not to be. Were this so, I felt that I was standing upon somewhat thin ice in much that I had to say and I found it advisable to walk somewhat a-tiptoe until I felt more secure. I therefore determined to investigate the point at an early stage of animal life when the tissues appear to be, as a rule, most amenable to staining methods. As I have related in the *Edinburgh Medical Journal* for November of this year, I selected the fully grown fœtus of a cat for the purpose and was fortunate enough to find not only that the pial vessels were fully innervated by an ample plexus, but also that branches of nerve might be found in close relation to blood-vessels which bore fully developed and permanent ganglion cells. Thus, then, another non-neural persistent rhythmicality has found its way to the limbo of many an ingenious hypothesis. The preparations under the microscope and their reproductions on the screen show these structures the relation of which to sleep and cerebral activity must be a very important one. Assuming, therefore, that the nervous system bears an important relation to splanchnic as well as somatic motion in health, I assume also that that relation is quite as important in the case of disordered visceral sensibility and motion. Having argued that motion, whether sensory or mobile, to use a convenient although tautological expression, is one in kind in all organs although modified by the functional nature of the organ manifesting it, I shall take as the type of disordered sensibility and motion abnormal conditions of the heart for fuller discussion, as those with which circumstances have rendered me most familiar and shall apply the lessons which they seem to point as rationally as I can to disordered sensibility and motion in other organs.

On the threshold of such a discussion it seems necessary to inquire what the local elements in visceral or referred pain are? It occurred to me that the uterus might be taken as the best physiological type of visceral pain and that an examination of the finer innervation of that organ might throw some light upon the general question. This I have accordingly done and should I in the course of my anatomical remarks relate facts known to others and discovered by others without due acknowledgment I must plead ignorance of such previous work and can therefore disavow any intentional plagiarism. A lateral branch from a large nerve in the uterus is given off so that the portions chiefly constituting it appear to run in opposite directions in the outer strands of the parent nerve and within its adventitious sheath. Fibres may also cross over the trunk from the opposite side to join the branch. As the branch increases its distance from the main stem its division for distribution takes place as one would expect by gradual subdivisions which naturally diminish the size of the parent branch. On examining the mode of distribution of a small branch or twig and noting its relation to blood-vessels we find that some of the smaller sub-divisions tend to follow the course of the vessel and others cross it for final distribution to individual muscle fibres. The branches following the vessels form a plexus around them, a sort of plexal tube or sheath through which the vessel runs, and by twigs from which it is innervated. Before distribution to the organic muscle triradiate nuclear points of dispersion may be observed as in other structures, such as the pial membrane and the pelvis of the kidney. Nuclei strengthening fine fibrils may be observed in the uterus as elsewhere, but I have also noticed a peculiar relation of some neural swellings or nuclear points on the uterine fibrils which I have not seen elsewhere but which may nevertheless quite possibly occur. A rounded nucleus may be placed quite laterally to the fibril so as to constitute a rounded knot or excrescence upon it, and which is so rounded and displaced laterally as to convey at first sight the idea of a small ganglionic cell but which on examination by high power ($\frac{1}{12}$ immersion) reveals nothing more than an irregularly stained nuclear body somewhat resembling a small Paccinian corpuscle but without the characteristic striation of the latter. The local causes of pain in the parturient organ which may for convenience be termed visceral pain are uterine and extra uterine. By extra-uterine pain I mean such as is caused by pressure upon surrounding textures, including those innervated by purely somatic nerves as the uterine contents are extruded. With such pain I am not at present concerned, although it perhaps constitutes a great, if not the greater, portion of the pain incidental to labour taken as a whole. The total pain is, however, undoubtedly commensurate with the degree of uterine contraction and some of it appears to be localisable in the uterus itself, for pain is present before extra-uterine pressure is a considerable factor in the situation and also after labour is over, when coagulated blood or other residuum has to be extruded. Such essentially uterine or visceral referred pain must, it appears to me, be caused by intramural pressure upon sensory nerve structures distributed to the muscle. The absence, however, of visceral pain under circumstances in which we might *a priori* expect it to be present is a striking clinical fact. As we saw last year the visceral nerves in the absence of inflammatory states are so little sensitive that organs may be freely manipulated and even injured without the evident production of painful sensation. Nodules of malignant disease may also stud a viscus and cause little pain. Cysts may rupture into the pericardium and elsewhere, causing death, of the presence of which there was no sensory or other evidence during life. On the

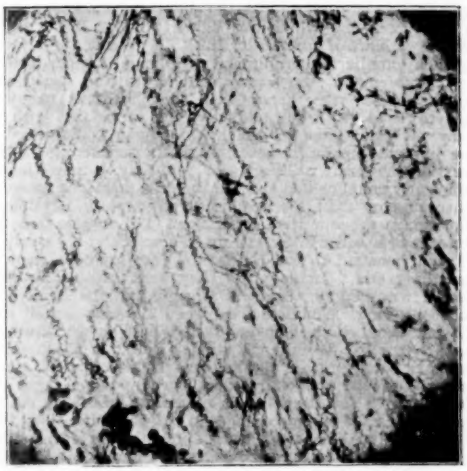
[3] Journal of Physiology, 1895.

other hand, it is commonly observed that in certain situations and without inflammatory lesion visceral pain may be as well marked in the splanchnic as in the somatic nervous system. Large calculi may lie in a gall-bladder for a lifetime without causing pain, but even a small one under the peristaltic grip of the bile-duct may cause an agony which from its very intensity may prove fatal. The same is true of renal calculus. The stone once engaged in the ureter may jeopardise life and even cause death from collapse due to the severity of pain, while very little and it may be no pain may attend its presence in the pelvis of the kidney which we have seen is richly endowed with nerves having the anatomical character of peripheral sensory nerves. Slight causes may, moreover, provoke great visceral pain, such as the colic which is due to very moderately irritating material in the alimentary canal.

It would appear, therefore, that visceral pain in the absence of inflammatory conditions may be of direct and indirect origin and that it has some relation to the degree of pressure exercised upon sensory nerve endings either directly by such action as the passage of a calculus through a narrow peristaltic tube or the indirect spasm induced, it may be, by slight causes in the visceral muscle. It is, therefore, the implication in disease of orifices having contractile cavities behind them which is most calculated to make pain a prominent feature in clinical histories. Thus the strictly local ravages of disease in a viscus may be painless, but the provocation by it of tetanic muscular action or cumulative peripheral pressure may cause much suffering. Finally, visceral pain may be the peripheral expression of a central lesion. That pain should be referred to a locality where the original stimulus is situated, as it must of necessity be somewhere, does not seem in any way remarkable. It is but a form of touch, a painful touch, and the whole utility of touch, whether painful or otherwise, is to indicate locality and the character of the circumstances surrounding a sentient being. Pain may, indeed, in some measure be regarded as a beneficial provision for the preservation of the individual. But the experience of pain not at the site of its cause is somewhat remarkable. The surgeon is familiar with the pain of vesical calculus referred to the end of the penis and with the knee pain of hip-joint disease. In like manner do the visceral crises of tabes appear to be caused by a peripheral projection of sensory irritation from structures in process of sclerosis.

With this introduction I pass to the consideration of cardiac pain as a type of disordered visceral sensibility. The natural provision made for safeguarding from undue mechanical stimulation the nerves entering and permeating an organ is nowhere better seen than in the heart. If the heart of an animal be taken which has died in systole and be fixed in that tetanic state forthwith by being placed in alcohol, microscopic sections show well the means adopted by nature to protect both vessels and nerves from undue squeezing by the close-grained organ. The specimen I throw upon the screen is from the apex of a sheep's heart prepared in the manner stated. The largest nerves may be seen to be situated nearer the vein than the artery, as they enter the organ at its surface, while the neuro-vascular atrium is also well padded with fat. The whole constitutes a perfect contrivance for obviating undue pressure from the surrounding muscle which may be observed to be in a state of systolic contraction. The same perfect adaptation to circumstances which we see at the surface obtains as we follow the nerve trunks into the organ, the vessels and nerves coursing largely together and being protected in more open situations by associated fat cells. The heart being like the uterus, an organ having a wide range of contractile variability, if the suggestion I have made in explanation of the tortuosity of the uterine nerves hold good we should expect a somewhat similar provision to exist in the heart also, and we find that it is so. Coils such as are met with in the uterus are not found for sufficient reasons which need not be discussed further than by pointing out that the return of the organ to smaller size is but momentary in the case of the heart and the difference between its maximum and minimum less than in the case of the uterus. Berkley [4] refers to the "wavy" nature of the nerves passing through the cardiac muscle. My preparations like his were made from the lower third of the ventricle and include of course the absolute apex. The rich innervation of the part is well seen in the specimens I place under the microscope which I stained by the quick Golgi-Cajal method and also from their reproductions on the screen. It will be observed that waviness is a very mild term to express the almost corkscrew tortuosity of some of the nerve trunks depicted. One can readily conceive the perfect

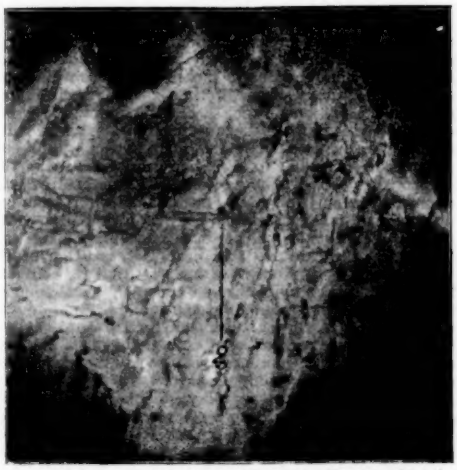
FIG. 1.



Golgi-Cajal preparation under low power of nerves in the apex of a cat's heart showing their tortuosity.

adaptation of such a contrivance for suiting the altering state of the organ in systole and diastole. In the systolic organ as in the non-gravid uterus the threads of the screw, so to speak, are approximated, while in the diastolic organ as in the gravid uterus they are extended. Now, dilatation of

FIG. 2.



Golgi-Cajal preparation of nerves in the cardiac apex of a cat. G marks a ganglion.

the heart is in a sense a partial and persistent diastole, a condition in which the threads of the neural screw must be somewhat extended and it is conceivable that such extension may be associated with a degree of sensory stimulation having in its train various degrees of motor consequence to which reference will be made in their proper place. At present we are concerned with sensory phenomena and we know that the sensory incentive to motion—a reflex—need not be experienced as a sensation unless the resultant motion be of a type to induce sufficient peripheral stimulation to cause pain. This, I believe, it may do. Then one of the forms, the indirect form, of angina pectoris is the result. Stimulation of the cardiac nerves on this principle, which is

[4] Loc. cit.

not provocative of visceral spasm may cause various irregularities of rhythm to which also I shall refer later, as well as various degrees of sensory discomfort not amounting to angina which cardiac patients frequently experience.

We have seen that the cardiac nerves in penetrating this organ are more or less intimately associated with blood-vessels and in the case of the larger vessels this association may be seen very distinctly in some of the specimens I show under the microscope and on the screen. The nerves in fact on transverse section may be seen to crown the arteries as the arteries themselves crown the heart. On longitudinal section they may be seen to course with and around the vessels. We can understand, under the circumstances, in the event of a hardening and irregularity of the arteries such as we meet with in advanced stages of arterio-sclerosis with calcareous degeneration, when associated, as it frequently is, with a cognate change in the interstitial tissues of the organ and in the interspaces along which the vessels and nerves find their way, how actual frictional contact with irritation of nerve trunks may induce frequent and ultimately fatal attacks of cardiac pain. Angina pectoris thus originated may be regarded as the direct type of angina or visceral pain, like the pain caused by the passage of a calculus along the bile or urinary ducts. It has been cogently objected to this theory of angina pectoris, that were it true, angina should be more constantly associated with the conditions mentioned than it is found to be. Atheromatous arteries are frequently met with after death which do not appear during life to have caused cardiac pain. I trust I may not be thought to assume too dogmatic a tone in the presence of some whom I regard as the chief authorities upon the subject which I am discussing when I express my belief that the association of angina with calcareous degeneration of the coronary arteries and hyperplasia of interstitial cardiac tissue is dependent in a great measure upon the degree of change in the vessels and in the channels in which they run, associated it may be in some cases with a certain amount of visceral neuritis which as we know would be calculated greatly to increase the sensibility of the nerves involved.

There are those who have described an anatomical sensitisation of the endocardium, and if they be correct, it is conceivable that the incentive to angina from increased blood-pressure within the chambers of the heart may be due to stimulation of such endocardial innervation. Professor Clifford Allbutt also ascribes great influence to intra-aortic tension as an etiological factor in angina pectoris. For myself, however, I am more disposed to regard intramural and intra-aortic stimulation of nerves as the cause of those reflex muscular changes which induce visceral pain, just as I attribute to similar causes the essentially visceral pains associated with a uterus in rhythmical action of a certain intensity. Such conditions as favour adynamic dilatability of the chambers of the heart, whether from local disease or general debility, are calculated to induce such stimulation and reaction as I have referred to and are most calculated to result in angina when to the indirect influences I have mentioned there are added local causes of intramural stimulation of the cardiac nerves.

Painful affections of the heart may as is well known be associated with somatic points, areas, and radiations of pain, and Walshe has described the opposite process of peripheral aura resulting in central cardiac distress.[5] In the case which Walshe refers to the pain began in the hand and spread up the arm to the chest. This must, of course, merely be regarded as the peripheral projection of a central stimulation, such as the shoulder pain associated with some hepatic conditions and other well-known somatic manifestations of visceral stimulation. For the local origin of angina is to my mind indubitable, and this conclusion has been impressed upon me by the situation in the right arm of anginoid pain in a rare case of dextral valvular disease of the heart which I published in the Transactions of the Pathological Society of London in 1876.

It does not follow, however, that cardiac pain may not have a truly extra-cardiac origin. Less frequently than in the case of some of the other viscera the painful crises of dorsal tabes may affect the region of the heart, as is stated by von Leyden and Goldscheider,[6] who quote other authorities for the same fact. The attacks may have the severity of *angina vera* and even threaten life. Whether the sensory phenomena of such crises may originate as some have supposed in the pneumogastric system may be left an open question. That the pneumogastric does not play the important part in the painful symptoms of visceral crises which was at one time assigned to it is fairly certain in view of our present knowledge of the pathology of the disease. In some cases, however, there appear to be grounds for associating such cases with central pneumogastric irritation, for although the nerve has a largely trophic influence its spinal sensory fibres, coming as they do from the far-reaching solitary fascicular strand, may be regarded as quite as efficient channels for sensibility as the lower spinal nerves and posterior root ganglion. All the phenomena of sensory localisation and radiation, however, in cases of visceral angina, whether cardiac, hepatic, or renal, indicate the spinal rather than the cranial nerve-supply as the chief territory of objective pain. This point would appear to have been first emphasised by Dr. Allen Sturge.[7] Ross[8] appears to have come to the same conclusion independently. Professor Clifford Allbutt made a similar suggestion in his Goulstonian Lectures in 1884 and, while laying more emphasis than Sturge did on peripheral excitation, essentially the same conclusion impressed itself on me before I was aware of his valuable paper on the subject.

It is considered by some physiologists that tactile and muscle sense sensations travel up the cord to the brain by way of the vesicular column and the gracile and cuneate nuclei, while sensations of heat and cold pass up through the grey matter to the optic thalamus. If this be so it may explain the alterations in the temperature sense in lesions of the cord involving the grey matter such as syringomyelia, but the degree to which such lesions influence the temperature sense in the viscera is for many reasons difficult to determine. It is difficult, indeed, to test the temperature sense in syringomyelia even of the stomach much beyond its cardiac end and even here we have the complicating condition of nerve-supply from another source above the seat of lesion. The temperature of hot and cold drinks may be appreciated in the stomach, but beyond it the warmth of the body in the case of cold drinks, natural loss of temperature in the case of hot drinks, and the comparative and normal insensibility of viscera generally soon seem to render the temperature indifferent and its perception impossible. It may be shown, however, in syringomyelia that while the surface exhibits abnormalities and loss of temperature sensation the temperature of imbibed material is still felt by the stomach and this retention of sensibility is probably due in some cases to the pneumogastric innervation of the viscera.

The association of cephalic paræsthesia with visceral disorders is a subject of interest. The situation and characters of such sensitiveness have been carefully studied by Dr. Head,[9] who has been the most recent observer to point out the situation of hyperæsthesia in the surface of the head in connexion with visceral disorder and has given anatomical reasons for the concurrent implication of the sensory nerves of the scalp. Such sensory points in connexion with visceral disorder undoubtedly occur as also do hyperæsthetic points on the thorax and trunk in connexion with cardiac and other visceral disease and disorder, but in a large proportion of headaches, chestaches, and trunkaches pain with little or no tactile hyperæsthesia or hyperæsthesia difficult to detect and delimit is, so far as my experience goes, the rule. This association of visceral disorder with cephalic pain has long been known and some forms of it have been carefully described. Pain in a certain proportion of these cases is probably meningeal, not cutaneous, and from its intracranial situation not accessible to tactile investigation and therefore not objectively hyperæsthetic. While searching for the innervation of the pial vessels I likewise investigated the innervation of the pia mater and found that the nerves which have long been known to course through it end in it by plexus, as I have stated in the *Edinburgh Medical Journal* for November, 1898. Some headaches, therefore, and the pain of meningitis are explicable by the copious innervation of the membranes of the brain and the neural pathology of the investment of that organ is thus brought into line with painful affections of the pleura and peritoneum. The severe headache of tertiary specific disease may in some cases be meningeal, but as the brain differs from other organs in being the seat of perception and the focus

[5] Diseases of the Heart and Aorta, fourth edition, p. 198.
[6] Op. cit., p. 544.
[7] Brain, vol. v., January, 1883, p. 492.
[8] Ibid., vol. x., p. 354.
[9] Ibid., 1893-94.

for the sensory channels of the body it is probable that in the case of this viscus disease implicating the structure of its centres and nerves may cause pain in a manner in which a similar lesion would not do in the case of other viscera. The determining factor for local pain in the latter I have argued is a simultaneous tension which increases the force or degree of impression, and in the case of visceral muscle a reflex cramp which squeezes nervous end-organs.

In speaking of the general trophic influence of disease of the central nervous system it was pointed out that pain and mental anxiety were the chief determining factors under these circumstances and that mental anxiety might be regarded as having the same relation to the intellectorium that pain had to the sensorium; that they were in short both painful emotions. Laycock, indeed, called mental anxiety *phrenalgia*, and considered depression of spirits and hypochondriasis varieties of that species of pain.[10] As the brain, moreover, is compact of many organs or, as I shall term them later, organules which concur to produce that multi-unity, the mind, which can distinguish the effects of the exercise or want of exercise of one organ or centre from those of another such as the different effect of the various special sense centres, so it is probable that the direct effect of the disorder of one viscus may impress the mind differently from the disorder of another, the harmonious and painless operation of all being necessary for that unconsciousness of the existence of a particular viscus which is characteristic of vigour and health. Some organs, moreover, like the liver and kidney, the functional activity of which influences the character of the nutrient fluid for the whole body, have when diseased a more depressant general influence than disorders or diseases in those organs which are chiefly mechanical or more specialised in function and effect. The attitude of the patient to disease is also no doubt modified in a measure by the condition of the mental organ itself. The naturally blunt and stupid who fail to appreciate the general gravity of their situation have also probably a minor power for the appreciation of discomfort and may exhibit a callousness in physical distress only attained in the more sensitive and gifted after a philosophic estimate of their general relation to things and time. But putting aside stupidity and philosophy the hope to live or desire to die as influenced by disease or disorder of particular organs is largely dependent upon the circumstances whether such disease or disorder saps energy or produces pain beyond a certain point which is open to individual variation. A pronounced and protracted sense of feebleness is little, if at all, more endurable than actual pain, and disease which engenders such induces a mental depression and despair of vigorous life more certainly than many more serious diseases which have not that specific effect. The suicide of the so-called convalescent from influenza—not an uncommon event—is an instance of this, and prolonged enfeeblement in general from any cause, with its concomitant discomforts and disillusionments, is productive of a misery which the serious disorder of a particular organ which does not rapidly and profoundly enfeeble or cause pain to a certain degree does not induce. Thus the cardiac sufferer whose natural vigour is good and whose diseased heart is well developed and has at times been well compensated, may evince much less and experience less distress than the patient who has experienced angina vera for the first time. Nothing has struck me as being more pathognomonic than the expression and general attitude of some patients on their first experiencing that form of cardiac anguish. It is like a "bolt from the blue" in their lives; they have never experienced anything similar before; the cloud-curtains of the unknown seem suddenly about to be raised and it fills them with an anxious astonishment which frequently on a repetition of the phenomenon plunges them into an acute despair, until the innate bravery of man at his best enables them to face that as any other contingency with indifference and with such aid as it is the privilege of the physician to be able to render. Chronic dyspeptics, again, with their minor but constant dysæsthesiæ with periodical exacerbations and imperfect hæmopoiesis, frequently develop a mental habit which renders them, like one of the most distinguished of them to whom we can forgive much, "gey ill to live wi'."

On the other hand, chronic disease which attacks youth is not associated with much pain and only deteriorates vigour in such a manner that the perceptive power of the individual does not appreciate great differences in this respect, may be coupled with all the sanguineness and natural expectation of life and usefulness which is proper to that period. The expectation of recovery of the phthisical, even in the last stages of the disease, is so well-known and common a phenomenon as to have become stereotyped in clinical language. There is no doubt under all these circumstances, except in the case of the stupid, a so-called metaphysical element in the manner in which the mind is affected by organic disease, but it may I think be regarded as based upon clinical facts that the mind appreciates the necessity for the exercise of philosophy least readily, as is most reasonable, when visceral pain and rapid enfeeblement are not dominant characteristics of the type of disease from which a given patient is suffering.

[10] Medical Observation and Research, second edition, p. 352.

ABSTRACT OF AN

Address

ON

THE WORK OF THE GENERAL MEDICAL COUNCIL.

Delivered before the Manchester Medico-Ethical Association at the Memorial Hall, Manchester, on Dec. 16th, 1898,

BY VICTOR HORSLEY, F.R.S.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—I had the greatest pleasure in accepting the invitation of this association remembering as I did the numerous pleasant occasions on which I have visited Manchester, especially in relation to the question of medical politics. To begin with I will just sketch out to you the lines on which I propose to occupy some of your time this afternoon. In the first place I wish to draw your attention to numerous defects in the procedure of the General Medical Council in the hope that by the publication of a few of these we may secure further reform. Then I wish to proceed from that to dwell on the way in which this publicity of these defects may be secured, and then to pass on from that to discuss some of the criticisms of my views on the General Medical Council and its work and, lastly, to pass to the large question of the amendment of the Medical Acts. I find that that would practically fill up the time that I can justifiably occupy. I know there are other matters of vital interest, but it seemed to me that if you would raise them by asking me questions we might expedite business.

The General Medical Council is an extremely curious body; it is unlike any other public body of men collected for public business I have ever come into contact with. Its duties, according to some persons, are those of superintending the education of medical men and registering them when educated, and for a long time these were regarded as the only objects of the General Medical Council. I think the members of the General Medical Council when they sit in the Council chamber collectively forgot their duty towards their neighbour; they forgot that by having entrusted to them the control of the Register that duty carried with it the necessity of observing the difficulties and dangers which affect the medical profession as a whole. For a long time they took no notice of these difficulties and did not seek to ameliorate the condition of the medical profession. For the last four years a change has occurred. There is a growing feeling, which is stronger at each session, that the responsibilities of the Council towards the profession are very real and require a larger proportion of the Council's time and attention. As regards, however, the procedure of the Council in its work it is unlike that of any other public body. It would astonish you to hear, for instance, that there is no record kept of the statements made in the Council chamber; there is no shorthand note of public meetings or private meetings; the only record that exists is what is published in the medical journals. In regard to the delicate work of the Council—namely, the penal matters—there are some standing orders in regard to these cases, but apart from these there are no regulations and the action of the Penal Cases Committee is uncontrolled. It used to be declared by

some members of the Council that the Penal Cases Committee was a kind of grand jury and every member of the profession consequently felt that if there was a grievance lodged against him it went before such a grand jury of his compeers for consideration. As a matter of fact it is authorised to act in this way, but the conduct of its business is wholly without rules. I succeeded last session in carrying a resolution whereby the Penal Cases Committee should report at the next session of the Council as to what procedure they do adopt. Upon that report I intend to bring forward such reforms as have occurred to me and which I know are occurring to other members of the Council in regard to this serious division of our work. There is another matter of congratulation in relation to penal cases procedure which I may refer to. Hitherto for some unexplained reason the Penal Cases Committee has not been elected annually and therefore has never been practically altered since it was constituted except by the death of one President and the election of the present President. I proposed at the last session that this should no longer be the case and that the committee should be renewed annually, and no one advanced any sound reason why this should not be done. It is hardly necessary to say, however, that when I first put forward this resolution it was temporarily shelved for six months and that the Executive Committee to whom it was referred did not think it advisable to make any alteration in the mode of election, but despite opposition I am glad to say that my proposal which was adopted by Sir Richard Thorne and moved by him as an amendment was carried by a large majority. Now the Council will have the opportunity of electing the members of the Penal Cases Committee every year or of not electing them as may be thought fit. This is a distinct step forward. Now to return to the question of characteristics of the procedure of the Council, I must of course allude to a prominent and disagreeable feature—namely, secrecy. You will have seen from the reports of the last session that very definite steps are being taken by certain members of the Council to introduce more and more difficulty in the way of anyone getting to know what is going on in the Council or of anyone (who has a right to know, such as registered practitioners) knowing what is about to go on which is of importance, because if a man has an interest in any matter before the Council he may naturally wish to go to the Council chamber to hear it discussed. This applies to us specially as registered practitioners, but it applies also to the public, and it is commonly forgotten by many members of the Council that they are a statutory body commissioned by Parliament to deal with *public* moneys, which moneys are not primarily the moneys of the Council; they are national funds, subscribed by members of the profession and paid by them as earnest-money when they register their names; therefore any discussion with a prospective or current concern in the spending of these moneys should be open to the general public, and the general public for the same reason have a right to know when a financial question is to be discussed. What was the arrangement in this particular up to the last session? Up to this session anybody who went to the public gallery of that Council and wishing to know what was going on asked in a courteous way in the office for a programme of the public business was handed a programme of the business. I am sorry to say that at this session under the recently established *régime* we discovered on the second day that members of the profession who came to the public gallery were refused programmes by the officials. I brought the matter up and I was informed by the President that programmes were never given away at all and that they had never been given away. I promptly refuted the denial, but in spite of what I said the statement was reiterated by the Registrar, chiefly in consequence of whose inaccuracy I lost my motion, though the President stated as an argument against me that the programme was a confidential document because the word "confidential" was written across it. I therefore there and then asked the legal assessor of the Council whether the printing of the word "confidential" across it made it confidential and he said of course it did not, though he conveyed the idea put forward by the official party that it would be just as well perhaps if the people in the gallery did not have the document. But the fact remains that public moneys are expended and public business is transacted and yet not only the public but registered practitioners are not permitted to see the programmes which are no more confidential than an ordinary newspaper. I dare say in a year or two we shall have this put right, but it is one of the attempts to conceal the Council's actions which is temporarily successful. The actual conduct of some of the proceedings *in camerâ* is of course obligatory in regard to penal cases, but there are many subjects discussed *in camerâ* which are on the borderland and ought not to be discussed *in camerâ*, but such is the alarm of certain members of publicity that they move the Council to go into camera, and the majority of the Council are so easily terrified by questions of law which are common knowledge to most people that they support the motion and the matter is smothered for a time. There are many signs which indicate that there is a strong wish to introduce what may be called Dreyfusian tactical proceedings into the Council. The President asked this session that he should be given more discretionary powers and he ruled out of order a resolution of mine which being perfectly in order will require discussion next session. The Executive Committee which was originally appointed to shorten the Council's work now by the nature of its reports lengthens the work. I moved last session sundry reforming resolutions which the Executive Committee reported upon in an obstructive and destructive sense which only caused a discussion of some hours with the result that we gained about 70 per cent. of the points and in the teeth of the Executive Committee's hostile recommendations. Among these, for instance, I proposed that the members of any committee should have an opportunity of calling their committee together if several of them thought fit. Whereupon the Executive Committee sought to again centralise the power to the chairman by proposing that he alone should have authority to convene a meeting. This somewhat comic act of obstruction was defeated as it deserved.

Another curiosity with regard to the procedure of the Council is the document question, but I am not going to weary you with all the details, for I have reported how the present state of affairs stands in my Report to the Registered Practitioners, but will pass to the question of delay of business in the procedure of the Council which is very serious. It is due to several factors. In the first place the members of the Council are not informed between the sessions of what is going on—they come to each session as it were like boys coming to school for the first time, excepting of course those members of any special committee to whom some small piece of business happens to have been referred. The papers are in the hands of the Registrar, who is a paid servant of the Council, and he enjoys the privilege of studying the papers which privilege by the action of the Standing Order of last session is refused to the members of the Council. That is the condition of affairs. On this latter point I was much amused to note the wording of the resolution which was carried by Sir Richard Thorne—namely, that the working of the Standing Order inhibiting and obstructing the inspection of documents was not *altogether satisfactory* and that it was desirable to facilitate the inspection. That is now to be done by a report of the Executive Committee next session. The reports will probably result, as before they have resulted, in putting the brake on, but at any rate we must be thankful for small mercies. This is the first official step down from the unwarrantable position assumed by the President last session.

[Here Mr. Horsley criticised the reports of the meetings of the General Medical Council which appeared in the *British Medical Journal*, finding them "very meagre" but adding that "not a word can be said against the accuracy."]

That brings me to the all-important question—namely, the question of the amendment of the Medical Acts—because I was agreeably surprised and pleased to think that I could detect in the Council at the last session a distinct glimmering of light on this subject. Of course, you have no time to read the minutes of the Council, but if you had you would have found that the legal assessor stated three years ago that in his opinion there was no necessity to amend the Medical Act. This statement was made in answer to a document from the Medical Defence Union pointing out a failure in the prosecution of an American quack and of a person struck off the Register for practising under a foreign degree who was not registered and that the Act had been seriously injured by the remarkable finding of the stipendiary magistrate of Cardiff. Three years ago the Council did not care anything at all about the matter and the legal assessor gave the opinion I have referred to. I am very glad to say, however, that in the last session I succeeded in getting him to withdraw from that absolute position. It was another instance

of giving way to stress of political weather. The Council had had laid before them the important case of the prosecution of an unqualified man at Norwich who was successfully prosecuted under the Apothecaries' Act and fined the full penalty, but as regards the Medical Act though he called himself both "doctor" and "surgeon" the magistrates held for some unexplained reason that he had no right to call himself a "surgeon" but that he had a perfect right to call himself a "doctor." I will say at once that this case brought home to the Council the point which has been the point of battledore and shuttlecock judgment in the courts for years—namely, the act of a person being "wilful and false" and the difficulties which are caused by the absolute decisions of magistrates deciding in cases. If a magistrate decides on a question of fact then there is no more to be said; if you appeal to the High Court all that is said is that the magistrate decided on fact and there is no help or hope for anyone and that is what happened in this case. The magistrates apparently were extremely friendly towards the defendant and they refused to state a case in the form I have told you. Such decisions are nothing less than driving a coach and horses through the Act of Parliament. This case unquestionably impressed the Council and especially because it was pre-eminently a matter of "title" and I think that the first step we must take if we want to obtain an amendment of the Medical Act is to first convert the General Medical Council to the necessity of the case and with this glimmering of light that I have mentioned we may see our way to advance a little further. There is another reason for first converting the Council. The Council is continually brought into communication with the Privy Council and under these circumstances the Privy Council naturally refers to the General Medical Council when it wants to know anything concerning medical legislation. It is obvious, therefore, that if the British Medical Association brings out an Amendment Bill, as I hope it shortly will, and sends it to the Privy Council it would be referred by that body to the General Medical Council. Moreover, to obtain our object we must bring influence to bear on the Government and the Council certainly has some influence with the Government; unless therefore we persuade the Council first we have little chance of the Government taking the Bill up as a Government measure and without that there is hardly any other way to pass a Bill. Therefore we must work to convert the Council to accepting the view of an Amendment Bill. I have already told you how the Council was in years gone by hostile to interfering with the Act at all, but that was chiefly because in those years the General Medical Council objected to safeguarding the rights and privileges of the practitioner. Now there is a change and I should say probably the large majority of the Council are sincerely anxious to protect the privileges of the practitioner. Now what ought an Amendment Bill to contain? Years ago among the various Bills that were proposed in the British Medical Association and out of it there were three points always prominent which points also appeared in the addresses of candidates for the direct representation of the Council and were as follows: the first was the question of representation in the Council, the second was the one-portal system, and the third was the safeguarding of registration.

As regards the representative or rather non-representative character of the Council Mr. Brown has put forward at different sessions of the Council a resolution that the Council should act under the powers under the Act of 1886 and appoint three more representatives, but that motion has never yet received a hearing; it has always been shelved. Towards the end of the session the President has usually made pathetic appeals to Mr. Brown to withdraw the notice on the ground that the time is too short. Though Mr. Brown, I believe, now quite intends to press the matter at the next session I am afraid it will be defeated so that we cannot reasonably look for help in that direction. But a new Bill might abolish all the representatives of the corporations and make the whole body of the Council truly elective and thus we should have representation in the highest degree. A second way would be that Section 4 of the Medical Act, 1858, which affects the constitution of the Council in regard to the representatives of the different bodies, should be amended so as to carry out its original intention. That Section states that a representative shall be chosen by each of the following bodies and that word "bodies" most of us hold to mean the whole body politic of each corporation. However, as you know well, the central councils of these corporations have, so to speak, grabbed the position and have refused in any way to consult the members of their corporations in the election of their representative. There is of course the remedy of going to the High Court, but that, I think, would be simply throwing away good money. It would be necessary therefore that an Amendment Bill should contain such wording as would make Section 4 of the Act of 1858 clear beyond dispute and that the election should be placed in the hands of all members of such bodies. This matter of representation rather hangs with the next question—namely, the one-portal system—because if the one-portal system were carried the Government would doubtless see that there was no reason for the representatives of the corporations being directly elected at all. I am bound to remind you that these gentlemen have constantly denied that they are representatives of such and such a corporation ever since Sir Dominic Corrigan once said that their discussions were nothing but battles of the shops. Nevertheless, we have occasionally at each session this shoppy character coming up. Last May session we had a strenuous dispute between the College of Surgeons of Edinburgh and that of England and at this last session also we saw the Crown representative of Scotland who spoke in the name of the Scotch schools as though the Scotch schools had been unfairly treated in relation to the examination for entrance into the services. These were instances of this shop feeling and so long as any representatives are elected by a small body such as councils of these corporations are they must inevitably have a relatively narrow view of things tinged by the colour with which their college happens to paint them.

In regard to the one-portal system for many reasons we must have an equalisation of the qualifying examination. The present system is wholly unjust and the practical question is what attitude does the Council bear towards it? I think the attitude at the present moment is rather favourable, though there is no doubt that the present Council will have nothing to do directly with any preliminary examinations, but though they dismissed a motion by Sir Christopher Nixon and myself a few sessions ago dealing with that point they rejected it in such a way as to show that the feeling existed that perhaps the one-portal system might be tried with advantage in the final or qualifying examination. If we pursue that line perhaps we shall find that the Council may be converted to a one-portal system. The President some years ago said to me at Liverpool that he would shed his last drop of blood against the proposal—and that is doubtless the feeling of the Scotch schools—but the equalisation of the character of the qualifying examination is so desirable a thing that the unreasoning opposition of any school need not be feared.

Next, as to the protection of our hard-earned privileges I must say that even now it seems to be thought by some leaders of the profession that there is something degrading in endeavouring to protect our privileges. If we have privileges we ought to protect them, is the view I take up, and I certainly object to a medical man being considered to be fairer game for exploitation than any other professional man. Still, it is the fact that there are leaders of the profession who hold the pessimistic view, and I mention the existence of this idea because I think it is our duty to endeavour to remove that idea wherever it exists, and here I think private influence on the part of the profession can do a great deal. The men we wish to influence come into contact with the people connected with the Government offices and they can exert a notable personal influence in some cases. This is a factor that is not to be disregarded from a political point of view, if we are to push forward the attainment of the amendment of the Medical Act, and undoubtedly this plan of privately influencing the leaders of our own profession would have much success and should be actively pursued. The chief privilege that has to be protected is of course practice and our first thought should be how that is to be safeguarded. Evidently in view of the conduct of the magistrates I have quoted above we must secure a re-drafting of Section 40, for if it be possible for a magistrate to state as a judgment that which is patently absurd, then it is clear that the Act on which he bases that judgment is capable of misinterpretation, and if so it must be corrected. I do not admit, and I never shall admit, that the reading of Section 40 could lead to misinterpretation by any ordinary person who reads it carefully. However, we have to take things as we find them, and as the Norwich case is the second occasion on which a magistrate has misinterpreted it it is clear that it

must be amended so as to make it clear to the magisterial mind. How we are to get forward and how we are to convert the Council is another matter. I think the Council should be approached in this sort of way. The branches of the British Medical Association ought to hold medico-political meetings as well as scientific meetings and at these medico-political meetings they ought to pass resolutions and not merely send them to the council of the association, but also send them to the members of the General Medical Council. Undoubtedly such communications gradually make some impression and turn the attention of the minds of the Council to the fact that the profession is feeling keenly on the matter. The worst argument that we have to deal with is that the profession does not care, and this statement is a peculiarly difficult one to put aside in a public debate unless we have distinct resolutions before us which have been framed at meetings and sent to the Council. I have already alluded to private influence brought to bear on the members of the profession who are not members of the Council—I should like to apply exactly the same line of argument towards those members of the Council with whom professional men are personally acquainted. Lastly, much good can be done by the members of any given corporation meeting together and passing resolutions to be sent to the council of their corporation to be sent on to the General Medical Council. Many of these representatives of the corporations in the General Medical Council say they never hear anything from the members of their corporations and therefore they can only assume that the members of the corporations are perfectly satisfied with what the Council does. I have repeatedly had this said to me at the Council and of course it cannot be completely answered except by the votes of the members of such corporations. My last word I have to say this afternoon is that if such meetings and such resolutions are passed relative to any given matter as I hope will be done in the Hunter case when the full facts are laid before the profession and if these resolutions are published in the papers, that will influence the Council and by such means you will support your direct representatives in the Council. They are in a minority and they feel in the minority occasionally, but they do not regard it as a hopeless minority if they have the support of their constituents.

INTERSTITIAL HERNIÆ AND THEIR TREATMENT.[1]

BY W. McADAM ECCLES, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE WEST LONDON HOSPITAL AND TO THE CITY OF LONDON TRUSS SOCIETY AND DEMONSTRATOR OF OPERATIVE SURGERY AT ST. BARTHOLOMEW'S HOSPITAL, ETC.

I HAVE to thank you for the honour you have done me in allowing me to read a paper before this ancient medical society, one of the oldest in the kingdom, founded as it was in the year 1794. The subject which I have chosen is one that I hope will prove of interest, for so far as I know it is not often dealt with and yet it is of considerable importance. Herniæ are sadly too common, inguinal herniæ form a large proportion of these protrusions, and inguinal herniæ assume an immense number of variations. It is to one class of these that I would direct attention in this paper—interstitial inguinal herniæ.

By the term "interstitial" is meant an inguinal hernia, a part or the whole of the sac of which lies in the planes of the abdominal wall. Normally—if one may use such an expression for a lesion—the parietal peritoneum which in an inguinal hernia is stretched and displaced until it traverses the inguinal canal remains either confined to that passage or transgressing the outlet, the superficial ring, reaches the scrotum or labium. Here is the well-known complete inguinal hernia. But suppose that for some reason—and what these reasons are will be observed later—this peritoneal pouch instead of making its exit from the canal dissects up one or other of the planes of the anterior abdominal wall; it is then justly spoken of as an interstitial sac. Such an abnormal position of the sac of an inguinal hernia is not so very rare and it is because its presence may lead to very grave consequences that I venture to bring forward the subject. Interstitial herniæ are usually classified under three varieties: (1) where the adventitious sac lies in the plane between the internal and the external oblique muscles of the abdominal wall; (2) where the sac is placed between the external oblique muscle and the superficial fascia and skin; and (3) where the peritoneum forms a pouch in the extra-peritoneal tissue and therefore between the peritoneum and the fascia transversalis. Of these three forms the first is undoubtedly the most frequent and the last that which is the least often recognised.

CAUSATION.

As to the causation of interstitial herniæ much speculation still exists. Congenital inguinal herniæ occur in large numbers and in the male infant they are generally associated with some want of proper development. This defect not infrequently shows itself in the arrest of a testis, sometimes in the inguinal canal, sometimes just external to the superficial ring, and occasionally within the abdomen. Now interstitial herniæ in the male sex are so commonly accompanied by an abnormal position of the testis that it would seem that there is a causal relationship between the two conditions. But interstitial herniæ occur also in women and, comparatively speaking, more frequently in this sex than in the opposite one. If 1000 cases of inguinal herniæ in females be taken—and perhaps I may remark here in passing that inguinal herniæ in the female subject are more frequent, if all ages be taken into account, than are femoral herniæ,—if 1000 cases therefore are examined in the female it will be found that about 6 are of the interstitial variety. But if a similar number of inguinal herniæ in the male sex be observed it will be only one that is of the interstitial form. The occurrence of interstitial herniæ in the female sex obviously disposes of the fact that partial or complete rentention of the testis is the sole cause of an interstitial hernia being formed. But the question that will at once present itself is, Are these cases of interstitial herniæ in women associated with a congenital herniation of the ovary? As far as I know this has not been demonstrated to be the case.

What, then, is a common factor which can be found in both sexes and one which may be taken as a cause? It will, I think, be found in the circumstance that in almost every instance of interstitial hernia, at any rate of the first or second varieties, there is a patent processus vaginalis or canal of Nuck. The case may therefore be stated thus: given a male infant who has a fully descended and properly developed testis, even if he has a processus vaginalis, yet he is very unlikely to be the subject of an interstitial hernia, though he is likely enough to acquire an ordinary variety of such a protrusion. On the other hand, take a male child, particularly of a few years of age, who has still an open process and an only partially descended testis, then will be present just the conditions which tend towards the formation of an interstitial hernia. The unclosed process of peritoneum allows the descent of viscera, the abnormally situated testis prevents the passage of the same into the scrotum. As an instance of this I may allude to the case of a young man, aged twenty-six years, whom I recently saw with an interstitial hernia of the first variety. As long as he could remember he had had a swelling in the right groin and at the age of ten years he commenced to wear a truss for the same. He was also confident that up to the age of sixteen years he had never been able to feel the right testis in the scrotum, not even at its upper part. When I saw him at the age of twenty-six years he had a well-marked interstitial hernia and the right testis, although smaller than the left, was well into the scrotum, at a position where the patient averred that he had only been able to feel it since he came of age. In this case probably the sequence of events was as follows. He was born with his right testis just within the superficial ring, together with a patent processus vaginalis reaching to the end of the canal. Into this there protruded at an early age some of the viscera of the abdomen. Then seeing that the testis blocked the way at the exit of the canal and that the intra-abdominal pressure was ever at work above the peritoneum was gradually stretched in the line of least resistance—namely, into the plane of the abdominal wall between the internal and the external oblique muscles. Still later the force of the protruding contents of the sac led to the testis, although tethered by its cord, being forced through the ring into the upper part

[1] A paper read before the Plymouth Medical Society on Nov. 9th, 1898.

of the scrotum, with the formation of a short scrotal portion of sac.

But I have now to consider what is the second cause at work in the female sex in the production of an interstitial hernia. It has already been seen that in this sex, as in the male, there is usually present a patent process of peritoneum, but there is no herniated ovary to take the place of the partially descended testis. In the female, and especially in the female infant, the superficial ring is less of a real opening than it is in the male. In this fact, then, probably lies the cause that we are in search of, for as in the male the testis blocks the way, so in the female the narrow aperture bars the exit of the hernia and the peritoneal pouch is forced again in the line of the least resistance. In females interstitial herniæ rarely assume any large proportions till adult life has been reached.

There are two other possible causes of interstitial herniæ and these may both of them act in either sex, but perhaps only in adult age. The first of these is the action of an ill-fitting or improperly adjusted inguinal truss. If, as is so frequently the case, it happens that a measure is taken for the truss which is of too great a length it will necessarily follow that the pad of the instrument will come to lie over the superficial ring. The effect of this in an oblique inguinal hernia may be to effectually prevent the descent of the viscera through the exit of the canal, but to offer no protection against their prolapse into the canal itself through the deep ring. Thus the intra-abdominal pressure may gradually provoke the formation of a secondary pouch from that part which lies in the canal. Again, supposing that a truss, properly formed and accurately measured for, is adjusted too low down so as to lie once more over the superficial ring, and not over the deep ring and the canal, exactly the same circumstances may occur. The second cause that should be mentioned is *réduction en masse*. If this is produced by forcible taxis, so that the original sac is dislocated from below into the tissues constituting the abdominal wall, doubtless a rare form of this not frequent accident, it will follow that in reality an interstitial hernia is formed and one which may be termed a traumatic interstitial hernia. Interstitial herniæ are more common on the right side of the body than on the left, probably for the reason that the right testis is more frequently arrested than the left.

SIGNS, SYMPTOMS, AND DIAGNOSIS OF INTERSTITIAL HERNIÆ.

1. The first variety of this form of inguinal hernia has a ventral swelling, but one that is not so apparent as that which occurs in the second form. The swelling that is so distinct in the adult will in the infant be but slight and it is this fact that leads to this class of hernia being overlooked in its early stages. But if the conditions which are favourable to its production are present it may be surmised that it is probable that the hernia may be developing. The projection in its more advanced stage presents itself as a flattened oval tumour, which lies above and parallel to Poupart's ligament and extends upwards and outwards towards the anterior superior spine of the ilium. Occasionally the direction is towards the umbilicus or nearly vertically upwards. The reason of the passage of the sac outwards is probably that it is the line of least resistance, since the muscles are less closely applied to one another in that region than towards the linea semilunaris. If a patient who is the subject of this form of hernia be requested to assume the horizontal posture most if not all of the swelling will disappear, but if then he be asked to cough a characteristic sign will present itself. As the expulsive efforts are made the viscera descend and then gradually, as it were, dissect up the plane of the abdominal wall towards the anterior superior spine. I have seen one instance where this dissection was very slow, but in the end reached almost to the level of the umbilicus. Sometimes in addition to the portion of the sac that is seen on the abdominal wall there is a part that reaches into the scrotum or labium. If such is present often a very distinct groove marks the limit between the two. The muscles which lie in front and behind the sac in the ventral region are not infrequently much atrophied, so that when they are put into action no very great amount of hardening is felt over the swelling. This first variety of interstitial hernia is usually completely reducible, for the mouth of the sac is generally of some considerable size. Strangulation, however, does occur and when present it may be very severe. There are but few conditions which are likely to be mistaken for this form of inguinal hernia. Indeed, the characteristic shape of the tumour, its evident connexion with the abdominal cavity, and the way in which it appears when the patient coughs, all go to make its recognition a matter of ease. An abscess of the abdominal wall, a collection of pus which has had its origin within the abdomen, a large hydrocele of a patent processus vaginalis of a partially descended testis and a hæmatoma are all swellings which may occur in the same region, and although it is unlikely that any one of them should be taken for the hernia yet it is not so uncommon for the hernia to be thought to be one of them. Obviously an error in diagnosis of this kind might lead to very serious consequences.

2. The second variety of interstitial hernia has also an external swelling and one that is usually, at any rate in its later stages, very well marked. The projection has, moreover, the appearance of being more superficial and can be traced to the superficial ring, which is often of considerable size. Like that of the first form it has a tendency to progress towards the anterior superior spine of the ilium, but the reason why it should take this course is not so clear as in the former case. It may be that the superficial fascia is less firmly fixed to the aponeurosis of the external oblique than elsewhere. The swelling is not so flattened and there is no hardening of muscle over it as in the first form. There is much more usually a part of the sac in the scrotum in the second variety. It is probable, because adhesions have formed at the upper portion of the scrotum or labium, that the secondary sac has been added to the original one. Occasionally the swelling may be so large and pendulous as to hang over, that is in front of, Poupart's ligament and thus to simulate a femoral hernia. This peculiarity may lead to a vertical incision being made for the relief of strangulation, especially in the case of women. The second variety of interstitial hernia is rather more liable to strangulation than is that which has been above described, but the contents of the adventitious portion of the sac are usually reducible. The differential diagnosis of this form of inguinal hernia is analogous to that of the preceding save for the fact that it may have to be distinguished from a femoral hernia. This may be readily done by observing that the bulk of the swelling has its site well above Poupart's ligament and that the base of the tumour is in the same region. In the male subject it is generally easy to slip the forefinger into the inguinal canal and thus prove that it is empty and that a femoral hernia exists, but in the female this is not so readily accomplished.

3. The third variety of interstitial hernia, in which the additional sac lies in the extra-peritoneal tissue, has no external or ventral swelling, and, as has been indicated, it is rare for this to be recognised except as the result of operation or after death. The secondary pouch in these cases is most usually found in the loose tissue of the iliac fossa, but sometimes it passes between the bladder and the body of the os pubis. In most of these instances of pro-peritoneal herniæ, as they have been termed, there is a sac in the scrotum or the labium. It is difficult to decide in many cases which is in reality the first part of the bilocular sac to be formed. There is the original process of peritoneum in the inguinal canal and probably in most instances this is prolonged into the scrotum or labium, and then possibly as the outcome of adhesions and irreducible contents the secondary sac is gradually formed in the lax tissue of the sub-serous layer of the abdominal wall. One of the chief interests of this third form of interstitial hernia is the fact that this hidden portion of the sac may give rise to the production of one of the varieties of *réduction en masse*. If a scrotal hernia is not reducible spontaneously and taxis is applied the contents of the lowest part of the sac may be reduced, not into the abdominal cavity, but into that part of the sac which lies above in the iliac fossa. Naturally in the case of a strangulated hernia this result is of very grave import, for the surgeon may conclude that satisfactory reduction has been accomplished, whereas what has really occurred is that the contents have indeed changed their location, but they are still strangulated at the neck of the sac. This circumstance which may arise in almost any case of complete inguinal hernia, though undoubtedly it is infrequent, is one of the arguments for the performance of herniotomy in all cases of strangulation in preference to taxis if not otherwise contra-indicated. In a few rare instances a secondary pouch from a femoral hernia has been found lying in the subperitoneal tissue between the os pubis and the bladder. In the matter

of diagnosis of the third form of interstitial hernia, seeing that the secondary sac is hidden and unknown, there cannot be any condition from which to distinguish it, unless strangulation is in evidence. Then the case becomes one of intestinal obstruction associated with a hernia which itself may not show many, if any, of the signs of strangulation. I shall allude to this again.

THE TREATMENT OF INTERSTITIAL HERNIÆ.

The treatment of interstitial herniæ may conveniently be divided into two sections: (1) one where the contents of the hernial sac are reducible; and (2) the other where they are strangulated and therefore irreducible.

1. *The treatment of reducible interstitial inguinal herniæ.*—As in the case of any reducible hernia its treatment may be either mechanical or operative. An interstitial hernia is not by any means an easy one to control thoroughly by a truss, particularly if from neglect or otherwise it has assumed somewhat large proportions. There is a tendency for the viscera to "ooze" as it were down into the sac in spite of the pressure of the instrument. In an adult where from any cause an operation is not expedient an interstitial hernia of the first or second variety will have to be treated by the application of a suitable truss. If the ventral swelling is but slight it may be that an ordinary inguinal truss with the usual-sized pad will be sufficient to retain the viscera within the abdominal cavity. As, however, in adults the sac has reached such dimensions that this form of truss is not very efficient it is generally necessary to employ a variety of instrument fashioned after the model of the inguinal pattern with the pad in the form of an interstitial plate. This extends upwards and outwards from the limits of an ordinary inguinal pad. When such a truss is adjusted to the body the plate will lie over the inguinal canal and cover in addition the area which lies directly above and external to it. A like pattern of truss is often a useful one in those cases of traumatic ventral herniæ after some operations for suppurative appendicitis. It may also if made in vulcanite be employed with great advantage after inguinal colotomy. In some instances of the second variety of the interstitial form of hernia a rat-tail truss may be of very good service, especially where there is some considerable scrotal or labial protrusion. The slightly modified shape of the rat-tail, known as the forked-tongue truss, is more satisfactory in other cases. Passing to the operative treatment of these herniæ, it must be said that they are some of those in which operation is not only justifiable but strongly to be recommended, provided that there are no contra-indications. In young male children the subjects of commencing interstitial herniæ, particularly if they have an arrested testis, have a lesion which can be most satisfactorily treated by operation. In dealing with these there are two important points to be discussed. The first is, what should be done with the secondary sac?, and the second, in a male subject what is the line to be adopted with regard to the arrested testis? When a radical operation is performed for an ordinary scrotal hernia it is not usual at the present day to disturb the portion of the sac which lies outside the superficial ring but to make the incision at once over the line of the canal and then to cut off the sac right up at the deep ring. The same principle may be followed in the case of the interstitial hernia. A free incision exposes the ventral portion of the sac but only that part of it which occupies the place where the inguinal canal should be. The region of the deep ring is then laid bare, the peritoneal pouch at its narrow part is removed flush with the anterior parietal peritoneum, but the greater part of the adventitious sac is left *in situ*. There is much less risk in doing thus than in widely dissecting up the planes of the abdominal wall. When the secondary sac lies in front of the external oblique one has to deal with a case which is quite similar to an ordinary oblique inguinal hernia. The neck of the sac is still within the canal and this is freed and cut through, while that portion of the sac which is external is untouched. In the instances of young males it is but seldom necessary to introduce many or even any sutures into the muscles, for when once the stretching force has been removed these structures naturally contract and fall into their proper relations. There has been a congenital opening in the parietal peritoneum; this has been closed and there is no further tendency to the production of an acquired hernia. The second point that ought to be considered is what is the proper line to be taken with regard to the arrested testis. In many cases in children it would be almost impossible to determine accurately whether the testis is normally developed for the period of life. In the adult this is an easier question to answer, but even then it is difficult to say whether a small ill-developed testis may not have the power of secreting spermatozoa. In dealing with cases of arrested testis in radical operations for hernia my usual plan is, if the patient is a child, to always replace the testis in the subserous tissue, while in adults, if the gland is very small, to remove it altogether, provided that the patient consents. By this plan of removal, only of course if the opposite testis is well formed, a very thorough operation on the hernia can be carried out, for the inguinal canal need not in any way be preserved. I do not think that there is much or any benefit, even in infants or young males, to attempt to bring the ill-developed testis down into the scrotum. It is seldom that this can be done perfectly and my own experience is that but little good accrues to the testis which has been so manipulated. Further, I do not think that there is any danger from returning the testis to the extra-peritoneal tissue, where it will lie in comfort and certainly not be more liable to malignant infection than one that is normally placed.

2. *The treatment of strangulated interstitial inguinal herniæ.*—Like any other form of hernia, it is when strangulation occurs that the chief danger arises in interstitial herniæ, but there is even greater gravity in the strangulation of these special herniæ than there is in those of the more ordinary varieties of protrusions. Here there are often sacs, part of which may lie hidden and part of which may contain bowel which is nipped while other portions are free from the constricting force. For the two former forms of interstitial hernia the treatment when strangulated differs but little from that which would be followed in the case of an inguinal hernia which presented no peculiarities. Taxis is not to be recommended, I venture to believe, in the majority of strangulated herniæ, but it is particularly to be avoided if possible in these interstitial ones. Operation should be undertaken at the earliest opportunity and an attempt made after relieving the constriction and returning the contents of the sac to radically obliterate its neck. Great care has to be exercised if taxis is employed not to mistake the reduction of the contents of one part of the sac into another portion as complete return of the viscera into the abdomen. Again, the same caution must be taken when operating to be fully satisfied that all secondary parts of the sac have been thoroughly explored so that no imprisoned bowel may remain unobserved. In instances where there is a true pro-peritoneal sac in addition to a scrotal, or labial, one, the condition which occurs when strangulation takes place in the hidden part is a difficult one to diagnose with certainty. Generally speaking there will be all the signs of intestinal obstruction, but without the local ones of strangulation in the visible sac, which, however, may present some signs of inflammation. These cases should always be explored in the inguinal region without delay and if no secondary sac containing intestine is found then the case resolves itself into one of intestinal obstruction, the cause of which must lie within the general abdominal cavity, and an immediate laparotomy is called for. The actual strangulation in the third variety of interstitial hernia is usually at the common neck of the sac, but occasionally it is to be found at the entrance to the secondary hidden sac. In cases where *réduction en masse* has occurred and is evidenced by the continuance of symptoms of strangulation it is necessary to perform an operation and that without any delay. Thus the strangulation of an interstitial hernia is to be regarded with extreme suspicion and the prognosis which is given to be one of a guarded nature.

In conclusion, I hope that even if this paper has in it not much that is new, yet that there may be something of practical interest to each one of us, for we may be any day called upon to treat such a form of protrusion as that known as an interstitial inguinal hernia.

BARRY ACCIDENT HOSPITAL.—At a meeting of the Barry District Council held on Dec. 9th it was decided to send a deputation to the Local Government Board with regard to the erection of a small-pox hospital for the town and also in reference to the proposal that the accident hospital at present maintained by voluntary subscriptions should in future be carried on out of the public rates.

AN INQUIRY INTO THE PRODUCTION OF BLOOD PLASMA—ITS VITAL PROPERTIES AND MODE OF NOURISHING THE TISSUE.[1]

BY THOMAS GLOVER LYON, M.A., M.D. CANTAB.,
PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

IN former days the blood with its humours, fluxions, serosities, and viscosities was regarded as the seat of life, health, and disease. Prince Henry, speaking of his dying father King John, says: "It is too late; the life of all his blood is touch'd corruptible." The discovery of the circulation of the blood added other factors—a pumping apparatus and tubes with the necessary adjustments. It has only lately been proved that the parts in general performing the functions of the body are microscopic elements placed in definite arrangements and held together by connective tissue. This conception of active organs has now so completely seized on the scientific mind that it seems an unwarrantable presumption to claim for a fluid definite vital properties. There is, however, a half-way house in the matter. Red blood corpuscles are recognised as unnucleated vital bodies budded off from nucleated cells, and I hope to show that masses of protoplasma, minute compared with the blood corpuscles, moving freely over one another and thus forming a fluid, may possess vitality and perform vital functions. I shall for the sake of discussion, as far as possible, divide this paper into statements and arguments and for the sake of clearness assume living matter to consist of bioplasm holding in its meshes formed material. It is not intended here to enter into the abstract question of vitality. The word "vital" is used in relation to certain properties of what is called "living matter" which seem not to be possessed by the same matter after a quick change called "death" has occurred.

General statement.—I. Blood plasma consists of minute particles (plasmacules) varying in composition within very small limits which consist of bioplasm in vital relation with formed material, water, and salt. These plasmacules glide freely over one another forming a fluid. II. They possess definite vital properties—viz., vital molecular inertia, vital contact-attraction, and the power of zoosmosis. III. They are formed by a budding off from or liquefaction of the outer part of the cells of the retiform tissue of the intestines which have assimilated a part of the digested food-stuffs. IV. They are renewed by the cells of the lymphatic glands and the white corpuscles. V. The formed material is passed from the plasma in contact with the vessel walls by a vital molecular force (zoosmosis) into the tissues. VI. It is possible that platelets are aggregations of the bioplasm of blood plasma.

Argument.—Before reviewing in detail the points involved in this statement I will point out that *a priori* it seems unreasonable with our present knowledge of the bacterial cause of disease to suppose that we have permeating our tissues a helpless dead nutrient material liable at any moment to come into contact with antagonistic organisms.

I. The mere size of plasmacules presents no difficulties. Professor Michael Foster points out that protoplasma must be divided ultimately into very small particles (somacules) possessing all the properties of the whole except that of reproduction. In accordance with this plasmacular theory we find that plasma is treated with the greatest delicacy; it is enclosed in tubes of exquisite smoothness and the slightest rough handling, even contact with any solid except the vessel walls, brings about its disintegration. Again, the composition of plasma varies between definite narrow limits. Whatever food be ingested the blood plasma even in the portal vein remains of nearly constant composition. Water injected into the veins soon leaves the blood and remains in the areolar tissues until the blood can get rid of its own water and re-absorb that in the areolar tissue. In starvation though most of the tissues dwindle away the blood remains normal in composition. These facts strongly point to the view that the essential elements of the plasma are capable of maintaining their own integrity and that the plasma is not merely a solution of nutrient material.

II. There is a property of living matter which although in view of the microbic theory of disease must stand in the very first rank has not yet, I believe, received a name. It is indicated by the fact that arrangements of matter when alive remain nearly unchanged but after death go through definite changes and then disintegrate, becoming a prey to living organisms which were powerless against them when alive. I propose to call this property "vital molecular inertia." For our purpose the most important point to dwell upon is the definite change which takes place in bodies just after death before actual disintegration takes place. In muscles this is illustrated by the process of death stiffening.

Everyone reading an account of coagulation must be struck by the analogy between coagulation and death stiffening, each seems due to the death of a living substance. At every turn also we feel the want of some additional factor to explain coagulation. This factor I maintain is vitality of the plasma. According to this view, coagulation due to the action of ferment upon blood plasma happens only when the vitality of the ferment is in excess of that of plasma. I shall not go through the various intricate facts recorded as to the coagulation but only point out that upon this supposition an explanation is found for the following facts as yet not accounted for. Ferment injected into healthy blood does not cause coagulation. The injection of various substances into the blood in some cases causes coagulation and in others prevents it.

Assuming plasma to possess vital properties, these substances will have their effect in favouring or retarding coagulation according to their relative actions upon the vitality of the plasma and the ferment. The fact that blood can be kept indefinitely in tubes formed of blood-vessels is quite in accordance with the retention of vitality by blood plasma. The products of coagulation, fibrin, globulin, &c., should not be regarded as constituents of blood plasma, but merely the débris left after coagulation has been effected. "Absorption" as carried on by living tissue includes a process analogous to physical absorption and diffusion; living things suck in matter from other bodies and pass it on through their own substance. I propose to call the vital process in question "zoosmosis"; it is independent of diffusion and acts indifferently upon colloids and crystalloids. In general the process tends to equalise the distribution of the materials it acts upon, but sometimes it has the opposite effect, heaping them up in particular parts. This power is hinted at by Professor Michael Foster when he says: "The passage of material through the pores of a living cell takes place according to laws quite different from those of ordinary diffusion." It is the cause of the never-ceasing interstitial currents of fluid through every part of living matter alluded to by Dr. Lionel Beale. This well-known function of living matter has, I think, not been sufficiently invoked to explain physiological and pathological phenomena. The remarkable power of absorption shown by lymph and blood points to the possession of the power of zoosmosis by these fluids, though it is difficult actually to prove this.

Another property of living matter not much studied might be called "vital contact-attraction." It has its analogies in the physical properties called "capillary attraction" and "cohesion." It is indicated by the facts that when bodies are in contact with certain others a force is necessary to separate them and if parts of these bodies be in contact there is a tendency for them to increase the contact as much as possible. So far as our subject is concerned the important fact in relation to vitality is that living bodies vary in this respect according to their condition. To this force is due the separation of the red corpuscles in the normal blood. Normally there is an attraction between the plasma and the corpuscles maintaining the greatest amount of contact between them—that is, the separation of the corpuscles from one another. The force ceases as the blood dies and so the corpuscles fall into rouleaux. Again, there is a contact-attraction between the healthy plasma and the healthy vessel wall shown by the way in which the plasma clings to the latter. This contact-attraction enables the plasma to permeate the vessel wall but still keeps in contact with it even against pressure. In parenthesis the pressure in the capillaries cannot be very great. This attraction diminishes as the vitality of the plasma fails and deteriorated plasma leaves the vessels and flows into the lymphatic. This view is in accordance with the fact that albumose which injected

[1] A paper read before the Hunterian Society on Nov. 23rd, 1898.

into the veins causes increased flow of lymph also causes coagulation of plasma in the blood-vessels.

III. *Statement.*—Peptones, sugar, and emulsified fat are passed from the intestines by zoosmosis to the cells of the retiform tissue. These assimilate the peptones and a proportionate amount of the sugar and fat. The outer part of the cells is shed, forming plasma which passes into the blood-vessels. The excess of sugar is carried away by the portal vein. The excess of fat is divided up into minute particles forming the molecular basis of the chyle and is taken up by the lacteals. This act of metabolism is accompanied by production of waste products which give rise to an increase of urea in the urine.

Argument.—The distribution and structure of the recticular tissue of the mucous membrane of the intestines is exactly adapted to carry out the process described above. Professor Michael Foster gives the following description of a solitary gland in his Physiology, part ii., p. 516: "A solitary follicle, then, may be considered, in the first place, of a rounded capillary network fed and drained by small arteries and veins, all supported by a minimum amount of ordinary connective tissue. In the second place, the interstices of this vascular network are filled up with adenoid tissue the fine meshes of which are crowded with leucocytes of variable, but on the whole small, size. Lastly, the rounded mass thus constituted is surrounded by a lymph-sinus the fluid of which on the one hand bathes the mass and on the other hand is free to pass away into the neighbouring lymphatic canals." Furthermore, the adenoid cells are described as pushing processes between the epithelioid cells. In accordance with this view the adenoid cells show signs of great activity during digestion; some are found to be larger than others, as if the cells increase up to a certain size and then shed the outer part. Again, we have the fact that all the peptones disappear and a large part of the fats cannot be accounted for by what is found to pass by the lacteals. What is the most natural conclusion to come to? Surely it is that the missing food-stuffs have been assimilated by cells of some description. How otherwise are we to account for the disappearance of the peptones and a part of the fat and their transformation into plasma? I do not think the word "absorption" expresses the process in question; it is one of assimilation rather. If my view is correct surely the cells most likely to carry out such a process are the adenoid cells, for we know that this type of cell possesses the power of assimilation in a marked degree; they are placed in exactly the spot to effect this end and display great activity during digestion. Even if we look upon plasma as a secretion assimilation of the food-stuffs must precede the secretion. It does seem strange that it has never been suggested that the assimilative power of the recticular cells takes a part in transforming digested food-stuffs into plasma. Professor Michael Foster comes very near to this view in the following passage: "At the same time, bearing in mind that leucocytes or cells resembling leucocytes, many of them possessing in the number and nature of their granules or in other respects marked features, are found in the reticulum of the villi, we may be prepared to admit when fuller knowledge comes to us that these cells play some important part in the process of 'absorption' on which we have been dwelling." Both Professor Michael Foster's book and Professor Schäfer's agree that a profound change takes place in digested food-stuffs as they pass through the mucous membrane, but both are inclined to regard the epithelioid cells as the active agent and the vessel walls to a less extent. According to my theory there is no difficulty in explaining the large increase of urea found in the urine during digestion.

IV. Although difficult to prove many things point to the opinion that the lymphatic glands exercise a restorative action upon the lymph flowing through them. Lymph as it enters the lymphatic is, there is little doubt, plasma deteriorated in some way or other. These glands are so constructed that the lymph comes into contact with the adenoid cells analogous with those in the recticular tissue of the intestines and displaying a like activity. The renewal of lymph by the former and the production of plasma by the latter must I think be accepted or rejected together.

Statement.—The lymphocyte white corpuscles are as it were outposts of the lymphatic glands ready to assimilate deteriorated plasma.

Argument.—The presence of these omnivorous bodies scattered through the plasma is, I think, one of the best reasons for believing that plasma is alive. If it is only a nutrient fluid why do not the white corpuscles multiply indefinitely by assimilating the plasma? If now we regard plasma as budded off from the adenoid cells it would in the healthy states have the same vital molecular inertia as the corpuscles and so be able to hold its own against them. When, however, its vitality is impaired it becomes a prey to the corpuscles which first assimilate it and then perhaps shed off healthy plasma. Professor Michael Foster says: "The former (white corpuscles) probably exert a considerable influence on the blood plasma itself and help to maintain it in proper condition."

V. The question of the passage of nutrient material from the blood-vessels to the tissues is of the utmost importance and has lately been brought into prominence by Sir William Broadbent at Edinburgh when he expressed an opinion that grave disturbances of nutrition such as occurs in epilepsy and insanity may be accounted for by alteration in blood-pressure causing starvation of the tissues of the brain. In Professor Schäfer's book a complete explanation is claimed in the action of osmosis and infiltration. In it points of osmosis and infiltration are strained to the utmost if actual fallacies do not appear. Osmosis in relation to colloids sounds very much like a physical paradox. When we have to do with living tissues why should we not seek the cause of processes occurring in them amongst the vital functions which they are known to possess. The absorption of nutrient stuffs from the bowel has been clearly proved to be unexplainable by physical forces; then why should we confine our attention to these forces in studying the other end of the question—the entry into the tissues from the blood of nutrient material? When a function so important as the nourishment of the tissues is concerned we should expect it to be carried on by a process which cannot, except in extreme circumstances, be disturbed. We find this, I believe, in what I have ventured to call zoosmosis.

Statement.—When a deficit of nutrient material occurs in the tissues formed material from the plasma in the blood-vessels is immediately passed into the tissues by zoosmosis, the plasma deficient in formed material passes on giving way to normal plasma, and the process is repeated. The more quickly the deficit in the tissues is produced—that is, the greater the activity of the tissue—the greater will be the need of normal plasma to supply the want; in other words, a dilatation of the capillaries and quicker flow of plasma will be necessary. The normal formed material mentioned includes a due amount of oxygen.

Argument.—I think all observed phenomena agree with this view. It is proved that activity of the tissues is independent of the flow of lymph into the lymphatics—indeed, to get lymph experimentally from the lymphatics of a muscle put into movement it is necessary to knead the muscle. Then again, a large range of blood-pressure is compatible with good functional activity of the tissues. The possession by the capillary wall, the tissues, and the plasma of the power of zoosmosis at once explains the absorption by the blood of foreign substances and waste products against pressure.

VI. It is natural to ask what microscopic evidence have we of the presence of living substance in the plasma. It seems likely that blood platelets supply this. They take staining materials which usually stain living parts of the tissues. If the blood is removed and then an attempt is made to stain it the platelets do not appear, but if the blood is received directly into the staining fluid—that is, before the blood has had time to disintegrate—they are obtained in abundance.

In conclusion, I must apologise for having gone over so much ground, most of it rather difficult travelling; my justification lies in the fact that the questions here discussed hang together in a way which makes it impossible to consider them separately.

Victoria-square, S.W.

MANCHESTER EAR HOSPITAL.—The annual meeting was held on Dec. 6th in the town-hall under the presidency of the Lord Mayor. The total number of attendances on patients had been 10,708, as against 9507 last year. There had been 2299 new patients, as against 1990 last year, and the in-patients were 173, as against 128. Careful inquiries were made by the District Provident Society into the circumstances of the patients in order to prevent abuse of the charity.

A CASE OF SPINA BIFIDA OCCULTA.

BY P. MACLULICH, M.B. DUB.

I VENTURE to publish the following case as I believe that it will be of interest as illustrating a somewhat rare condition of spina bifida—namely, spina bifida occulta—and at the same time presenting some special features of its own. Cases of spina bifida occulta have been described by Virchow, Bland Sutton, and others, the essential feature of this deformity being the presence of all the conditions necessary to spina bifida, with the exception that the site is marked by a depression instead of a tumour, in which the skin, membranes, and cord are blended together. On looking up the records of the different cases which come under the common title of "spina bifida" I find that it is stated that over 50 per cent. occur in the lumbo-sacral region and 17 per cent. in the sacral region, while the remainder are found in the cervical and dorsal regions, the latter being the position of least occurrence. The following are brief notes of the case.

On Nov. 5th, 1898, I attended a big, healthy country-woman, thirty-five years of age, in her eighth confinement. I found the right foot presenting and delivered the child, a full-time female weighing slightly over 7 lb., with little difficulty. The mother stated that her previous labours had all been normal and were all head presentations. On subsequently examining the child's back the following conditions were found. Extending from the fourth dorsal vertebra downwards to the second lumbar was a depression covered by a thin, glistening, bluish membrane and having at its upper angle a fistulous opening about 4 mm. in diameter which passed upwards and slightly forward. There was no growth of hair over the depression or around its borders which is the usual occurrence in these cases, neither was there any hydrocephalus present, but, on the contrary, the different bones forming the cranial vault overlapped one another considerably, nor was there any deformity of the feet such as equino-varus which is frequently a concomitant of spina bifida. After birth the child made feeble attempts to suck and she soon developed cervical opisthotonos, tonic contractions of the arms, and paralysis of the legs, gradually sinking until she died on the fifth day after birth.

At the post-mortem examination, in which I was kindly assisted by Dr. Hinnell and Dr. H. Moorhead, the following interesting conditions were found. There was arrest of development of all the laminæ of the vertebral column, except that of the axis, this defect being most marked in the lumbar region, due I should think to the fact that the laminæ unite in order from above downwards. Also from the fourth dorsal vertebra upwards the neural arches posteriorly were replaced by a dense fibrous band; this was entirely absent over the region of the external visible spina bifida, but on further dissection was found to reappear at the level of the second lumbar vertebra and to be continued downwards from this point. The fistulous tract previously mentioned ran in an upward and forward direction and a bristle could be passed up this into the central canal of the cord. On examining the cranium it was seen that there was no posterior fontanelle and only a very small anterior one; this was caused by the various bones overriding one another considerably and being very firmly united so by dense fibrous tissue. The following were the relative positions of the bones of the cranium. The occipital overlapped the two parietals; the right parietal the left; the left portion of the frontal the left parietal, while the right half of the former was overlapped by the right parietal; also the metopic suture was well marked owing to the fact that the left half of the frontal was overridden by the right half. The vertebral column, as a whole, was rigid and it presented well developed curves the exact opposite to those seen in an adult—i.e., the dorsal curvature was convex forwards while the cervical and lumbar curves were convex backwards. Nothing else abnormal could be detected, except that the eyes were very deeply sunken in the orbital sockets.

The points of interest in the case are: (1) the non-union of the laminæ of practically the whole vertebral column; (2) the discrepancy between the extent of the apparent spina bifida and that which the necropsy revealed; (3) the presence of a fistulous opening leading into the central canal of the cord; and (4) the absence of other deformities and the tuft of hair which are usually described as occurring in these cases. I may mention as further points of interest that the patient's seventh child, who only lived a few days, had double hare-lip and a cleft palate and that her only relative who has ever had any congenital deformity is a nephew, three years old, who suffers from double talipes equino-varus.

Bury St. Edmunds.

A CASE OF TUMOUR OF THE ŒSOPHAGUS; TRACHEOTOMY; NECROPSY.

BY E. WHARMBY BATTLE, M.R.C.S. ENG., L.R.C.P. LOND.,

JUNIOR HOUSE SURGEON, WARRINGTON INFIRMARY; LATE HOUSE SURGEON, MANCHESTER ROYAL INFIRMARY.

I AM indebted to the kindness of Dr. E. A. Fox for permission to record the following case.

The patient was a man, aged thirty-nine years. His wife stated that at the end of March, 1897, he began to experience difficulty in swallowing. He continued well, however, until the middle of August when complaints were made of epigastric pain and "tightness of the chest." At this time a little solid food could be taken and though evidently ill he continued to work until August 29th. On this day he was seized with urgent dyspnœa and remained in bed until his admission to the Warrington Infirmary on Sept. 4th. In spite of increasing dysphagia no loss of weight had been noticed. The patient corroborated the above statement, adding that he felt perfectly well except for the difficulty in swallowing and the shortness of breath. He gave a history of alcoholism but not of syphilis. When seen a few minutes after admission the patient was sitting up in bed leaning forward. The respirations were extremely laboured and 28 per minute. There was loud inspiratory and expiratory stridor of equal intensity and duration. He explained the difficulty to be "breathing out," this pointing to the larynx as the seat of obstruction. The voice, quite clear and distinct, in no way, he said, differed from the usual. There was a troublesome short dry cough. On hearing the patient speak one got the impression of the voice being delayed, or rather of its succeeding the apparent effort to articulate. Speaking was painless but necessitated an increased expiratory effort. The face and hands were slightly cyanosed. The pupils were normal. There was no laryngeal movement during respiration and except for slight puffiness above the left clavicle the neck was normal. The chest was emphysematous and yielded no information beyond the fact that there was an equally free entrance of air to both lungs. There was granular pharyngitis, but laryngoscopically nothing abnormal was noted, both cords moving well. The pulse was 120 per minute and the temperature was 99° F. The dysphagia was extreme. On Sept. 5th the larynx was again examined and both cords were seen to move well. There was a suspicion of "brassiness" about the cough. During the morning there was an attack of severe dyspnœa lasting a few minutes. In the afternoon several such attacks occurred, becoming more prolonged and causing much distress and anxiety to the patient. During the attacks breathing was very rapid and cyanosis was more marked, but once they were over the patient lapsed into his previous condition of laboured respiration. Towards evening the cough became troublesome and morphia (¼ gr.) was given to relieve this symptom. Rectal feeding had been commenced in the morning, nothing but a little ice-water being taken by the mouth. The temperature was normal and the pulse and respirations were 130 and 27 respectively. On the 6th the patient had passed a comfortable night, sleeping four hours. Towards noon the respiration became more laboured and the cough more "brassy." Laryngoscopy was impossible. Tracheotomy was decided on with the idea of relieving the laryngeal symptoms which were now distressingly frequent. Under chloroform the operation was performed at 4 P.M. by Mr. E. E. Bowden. No difficulty was experienced in getting into the trachea and the effects of the operation were rapidly recovered from. The laryngeal spasms were relieved; respiration still continued laboured, rising by midnight to 45. The patient lived twenty hours after the operation, dying apparently from cardiac failure.

At the necropsy the heart was found to be enlarged and

flabby; the cavities, especially the right, were dilated. On the anterior wall of the œsophagus opposite the bifurcation of the trachea was an oval-shaped ulcer of the size of a florin. The centre was depressed and ulcerated; the margin was raised, indurated, and nodular. This proved to be epitheliomatous. Growing from the anterior wall above this and separated by an inch of healthy mucous membrane was a whitish globular tumour of the size and shape of a hen's egg. Over this protrusion into its lumen the œsophagus was tightly stretched, the bulging at this spot appearing before the tube was opened as if some body—as an egg, say—had lodged there. The mucous membrane of the anterior wall passed without interruption over the growth. It seemed almost impossible for even liquids to have passed this obstruction. The growth also involved the posterior wall of the trachea, projecting into its lumen as a nodular mass 1 in. above the bifurcation. The obstruction here was considerable, equal to two-thirds the calibre of the tube. The egg-shaped growth when cut into showed patches of softening. Microscopically the cells were identical with those of the ulcer. There was a large amount of small cell infiltration around the vessels. This growth also spread laterally, involving the apex of the right lung. This had the microscopical features of the tumour in the œsophagus. The left recurrent laryngeal nerve lost itself about the middle of the neck in an enlarged and probably infected gland. Unfortunately this escaped examination. The right nerve was quite normal.

Warrington.

SYMPTOMS OF POISONING FROM A SMALL DOSE OF TINCTURE OF CANNABIS INDICA.

BY ANTONY ROCHE, M.R.C.P. IREL.,
PROFESSOR OF MEDICAL JURISPRUDENCE AND PUBLIC HEALTH, CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN; EXAMINER IN THE ROYAL UNIVERSITY OF IRELAND.

IT is well known that different samples of the tincture of Indian hemp vary much in strength and also that many people are unduly susceptible to the action of the drug. In the following case the amount ordered was 12 minims every fourth hour till the pain complained of was relieved. The symptoms of poisoning showed themselves shortly after the second dose had been taken. The druggist who compounded the mixture assured me that no mistake had occurred and I took a dose of the mixture myself without any results—not a prudent course to follow, as has been more than once demonstrated.

In June, 1897, I saw a patient, aged thirty-three years, who complained much of an attack of migraine. She had at different times tried various methods of treatment without much benefit in alleviating the attack. I ordered her a mixture containing 10 gr. of strontium bromide and 12 minims of the tincture of Indian hemp in each dose, one to be taken every fourth hour till the pain was relieved or until four doses had been taken. After the first dose she felt much better and went out to make some purchases. On returning, about four hours after taking the first dose she took a second dose; within a few minutes she felt a strange feeling and an inclination to jump down the stairs. This she knew was absurd, so she clung to the bannister; she then went into her room and to bed, when I was sent for. I found her in bed in an excited, joyous state, quite conscious but, as she said herself, unable to control herself; she talked incessantly and assured me that she had such a good story to tell me, &c. Her eyes were brilliant and the pupils were slightly dilated but they reacted to light; her pulse was full and soft. She mentioned that she had a creeping sensation in her arms and legs. As it was more than an hour since she had swallowed the medicine and the symptoms were not urgent I did not administer an emetic but gave her some strong black coffee and assured her that she would be quite well in a short time. In about half an hour she became quiet and she then slept for an hour, on awaking being quite herself.

The case is perhaps worth recording. I find that Taylor mentions a case recorded by Mr. J. Roche Lynch[1] where the symptoms of poisoning were marked after a dose of 7 minims and Dr. John Attlee[2] has reported a case in a boy, aged twelve years, from a dose of 10 minims.

Dublin.

[1] THE LANCET, Sept. 30th, 1871, p. 493.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE RÔLE OF SYPHILIS IN THE ETIOLOGY OF SIMPLE ULCER OF THE STOMACH.

BY W. A. MACKAY, M.D., F.R.C.S. EDIN.

IN English medical literature syphilis is not given a very prominent place as a factor in gastric ulcer. Yet ulceration occurring anywhere else is looked upon with so much suspicion that specific remedies are almost invariably tried in doubtful or rebellious cases. Why not also in gastric ulcer? It would almost appear as if the ancient demon still presided at the cardiac orifice. Fournier cites the following cases. Case 1. About thirty years ago a young girl, a public singer, was treated for syphilitic rupia and was rapidly cured. Ten years later Fournier found this patient nearly moribund and at her side a basin well filled with blood. For more than three months she had been vomiting blood at intervals notwithstanding the administration of the usual remedies. Fournier prescribed iodide of potassium. He remarks that the cure was so rapid as to be quite theatrical in effect. Six years later this patient again presented herself in a critical condition suffering from hæmatemesis. She stated that she had returned from Italy, where on the onset of symptoms she had asked for the iodide, but her medical man refused it as being a dangerous drug in hæmatemesis. Fournier again prescribed the iodide and describes the effect as being little short of a resurrection. Case 2. A Russian suffered severely from syphilis, later he was attacked by hæmatemesis which gave way to specific treatment. Leaving off treatment this man suffered from rupia and hæmatemesis alternating, both of which readily yielded to treatment. It may be objected that these cases were markedly syphilitic and diagnosis and treatment appear easy and rational. I shall, however, now give an account of two more cases in which the history was not so clear and yet the treatment was equally satisfactory.

CASE 1.—A youth, aged fifteen years, was seized with pain and swelling of the ankle. Tuberculous disease was suspected and for this the patient was treated for some weeks. I then saw him and, recollecting that I had treated successfully his mother some time before for specific disease of the nose (the only manifestation she ever showed), I put the youth on blue pill and iodide. The joint recovered rapidly and completely. Ten years later this youth began to vomit blood and got steadily worse, although dieted carefully and given the usual remedies. Recollecting his former illness mercury and iodide were given with immediate good effect. I lost sight of this patient for three years. Meanwhile he married. His wife had an abortion at the third month and now he himself is under treatment for general paralysis of the insane which is temporarily benefited by the iodide.

CASE 2.—A man, aged twenty-four years, in a condition of complete collapse from loss of blood and fear of further vomiting, was put on mercury and iodide of potassium as a last resort although there was no history obtainable of syphilis. Within forty-eight hours improvement was marked. The treatment was continued and the patient completely regained his health.

It appears to me to be an extremely interesting fact in this connexion that bichromate of potash, introduced some years ago by Professor Frazer of Edinburgh and found so useful in cases of indigestion accompanied by pain, should prove to be the very drug which a century before in Spain and France was considered almost equal to mercury in the treatment of syphilis.

Huelva, Spain.

[2] Brit. Med. Jour., Oct. 3rd, 1896.

NOTE ON A CASE OF ACUTE INVERSION OF THE UTERUS.

BY C. HASLEWOOD, M.B., C.M. ABERD.

SUCH a case as the following is fortunately seldom seen in general practice and as the facts point to undue interference by a midwife it may be of interest to bring it to the notice of the readers of THE LANCET.

On Sept. 25th, 1898, I was called by a man to see his wife, a delicate, anæmic woman, aged twenty-four years, who had been attended in her third confinement by a midwife. But the midwife "could not manage" as "the afterbirth was fast." On my arrival about an hour after the birth of a female child I was met by the midwife who remarked that she had, "after several unsuccessful attempts, managed to get it away." Finding the patient in an alarming state of collapse I turned down the bedclothes and found the uterus inverted and prolapsed, lying between the patient's legs, with the placenta still partially adherent to the fundus. There had evidently been very considerable hæmorrhage and the radial pulse was almost imperceptible. After douching the part with a weak solution of biniodide of mercury I tried to reduce the inverted uterus and failing at the first attempt to do so I detached the placenta and tried again but without success. Not caring to administer an anæsthetic alone I was content with returning the inverted uterus within the vulva and after sending for assistance I proceeded to revive the patient who was well-nigh moribund. Mr. Hawkins-Ambler arrived later and with the patient under an anæsthetic reduced the inverted uterus, but not without considerable difficulty. Ether was the anæsthetic employed and the patient not only bore it well but seemed to be greatly benefited by it. The subsequent history is unimportant as the patient made an uninterrupted recovery and early in November was going about as usual.

Prescot.

TWO CASES OF WHOOPING-COUGH TREATED BY AURAL MEDICATION.

BY S. GLANVILLE MORRIS, M.D. EDIN.

THE following two cases were treated according to the method recently advanced by Dr. G. A. Stephens in the columns of THE LANCET.[1]

CASE 1.—The patient was a boy, aged five years. He had been suffering from whooping-cough for one week. There was a discharge from both ears, very considerable from the left one. The face was puffy. He vomited with the cough and passed very bad nights. I syringed his ears with warm boric lotion and painted the meatus and membrana tympani in accordance with Dr. Arbour Stephens's method. The first night of the treatment the child slept well; the vomiting ceased and the child has not whooped since. Pharyngitis, however, still was present, which caused cough, but on the fourth day the pharyngitis had greatly improved and the cough ceased. By the fifth day the child appeared to be well.

CASE 2.—The patient was a boy, aged six years. He had suffered from whooping-cough for one week. The appetite was poor, there was vomiting with the cough, but no pain or discharge from the ears. The ears were syringed and painted. On the next day there was no improvement. The treatment was continued. On the third night the child slept much better and whooped less, while the appetite improved. By the fifth day the child was well.

Nantgaredig, Carmarthen.

[1] THE LANCET, Dec. 3rd, 1898.

ROYAL ALBERT HOSPITAL, DEVONPORT.—The thirty-fifth annual meeting of this hospital was held on Dec. 16th under the presidency of Sir John Jackson. The report showed that during the year 581 in-patients had been admitted, as against 588 in the preceding twelve months. There were 1950 cases treated in the casualty department and there were 2826 members belonging to the Provident Dispensary. The financial statement showed that the expenditure for the year had been £4248 and that the balance had been increased from £305 to £487.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL FOR CHILDREN, PLAISTOW, E.

A CASE OF PANCREATIC CYST TREATED BY INCISION AND DRAINAGE; RECOVERY.

(Under the care of Dr. ERNEST B. RANDALL.)

IT is impossible to be perfectly certain that the cyst described in the following case was derived from the pancreas, but that is the most probable origin which can be assigned to it. The history of traumatism in this case is not very exact, but injury is a fairly common cause of cysts of this organ. Leith[1] has collected 17 instances and it is probable that they commence as hæmatomata. The sudden onset of acute symptoms no doubt points to the time when the contents of the cyst became septic. The operation was much simplified by the adhesions which had formed between the wall of the cyst and the anterior abdominal wall. Lately there has been a tendency to open pancreatic cysts by a posterior incision at the outer border of the left erector spinæ muscle and much is to be said in favour of this operation; but, of course, it is not advisable in a case where extensive adhesions have formed anteriorly.

A boy, aged fourteen years, was admitted to St. Mary's Hospital, Plaistow, on August 15th, 1898, suffering from abdominal pain. The patient had never in his life been ill until three months previously when he suffered for a fortnight from abdominal pain, feverishness, and sickness and was kept in bed and poulticed; since then he had been fairly well until his present illness, but his friends said that he had been getting thinner. On close questioning a history of a kick by a horse in the back a year previously was elicited, but the boy was not much injured and did not stay in bed. On August 13th he was taken ill with pain in the abdomen, sickness, and slight diarrhœa; on the 14th these symptoms continued, whilst on the 15th (the day of admission) the sickness and diarrhœa ceased, but the abdominal pain continued. On admission the temperature was 100°F., the pulse was 108, and the respirations were 28. The patient was a thin child looking younger than his age; he complained of general abdominal pain. On examination of the abdomen it was found that it did not move well on respiration. A well-marked prominence occupied the epigastric and upper part of the umbilical region; this prominence appeared to be almost median, the inclination being to the left. The abdomen was slightly tender all over. A well-marked tumour was felt corresponding to the prominence seen and gave the impression of being situated immediately behind the abdominal wall; it was tense, elastic, and fluctuating and was not moveable. A well-marked thrill could be obtained and in addition it was felt to pulsate synchronously with the cardiac impulse, but the pulsation was not expansile in character. The outline as felt extended from the ensiform cartilage and costal margin to a point 1 in. below the umbilicus, a distance of 6 in., and transversely 4 in. to the left and 3¼ in. to the right of the median line, giving a transverse diameter of 7¼ in. The surface of the abdomen was dull on percussion from the ensiform cartilage to a point ½ in. below the umbilicus, a vertical dulness of 5½ in., the transverse dulness being 6 in. An area of resonance a finger's breadth in width was present immediately below the left costal margin. The spleen was not palpable and the liver dulness was not increased. The chest was normal. The pupils were median in size and equal.

On August 16th the patient had passed a restless night; the highest temperature was 101°. No urine had been passed since his admission. A soft catheter was passed and

[1] Edinburgh Medical Journal, November, 1895.

18 oz. of urine were withdrawn; it was of specific gravity 1015 and acid and contained albumin (1 per 1000) but no sugar, blood, or bile. On the 17th no further retention of urine or albuminuria had occurred. The tumour was unchanged; it was explored with a needle, ½ oz. of chocolate-coloured pus being withdrawn which showed under the microscope leucocytes with a few red blood corpuscles and crystals resembling tyrosin; no hooklets were seen. On the 24th the patient had steadily become worse, wasting rapidly; the abdominal pain was less but the tenderness continued to be present. The temperature had been raised each night, the highest recorded being 103° on the 19th, with a morning remission to 98°. There had been no further albuminuria and the stools were normal in colour. The characters of the tumour were unchanged. The boy's weight was 3 st. 3½ lb.

An operation having been decided on A.C.E mixture was administered on a celluloid mask. An incision 2½ in. long, commencing 1½ in. below the ensiform cartilage, was made in the median line. The peritoneum was divided and the cyst wall was immediately exposed; it was found to be adherent all round to the anterior abdominal wall. Owing to adhesions it was impossible to make out how many layers of peritoneum covered the cyst but two large vessels were seen running vertically and were thought to be of omental origin. A trocar and a cannula were thrust in and fluid was withdrawn into a sterile vessel for examination; the wall was then incised and 16 oz. of chocolate-coloured pus were evacuated. The cavity was then explored with the finger and was found to extend in the direction of both loins and back over the aorta and spine in the region of the pancreas; neither diverticula nor bands were discovered. The cyst wall was about ¼ in. thick at the point of incision; a portion was excised for examination. The cyst wall was then sutured to the abdominal wall as a precautionary measure and the cavity was drained with four strips of bicyanide gauze.

On August 25th the temperature was 97°. The patient had passed a good night. No vomiting or bad symptom had occurred. The wound was dressed; there had been some penning up of discharge. The gauze was replaced by two rubber tubes. The subsequent history was uneventful, the temperature not rising above 99° and the discharge presenting no features differing from that of an abscess cavity in process of healing elsewhere. The patient was discharged from the hospital on Oct. 2nd quite healed. His weight was 4 st. 5 lb. On no occasion since August 16th was any abnormality of the urine discovered. On Dec. 1st the patient was examined. He looked fat and well. The abdominal wall showed a slight tendency to bulge over an area of about 2 in. on each side of the scar. Neither thickening nor tenderness was discovered on deep palpation.

Examination of fluid and cyst wall.—The fluid was found to consist of blood-stained pus with a few crystals resembling tyrosin. No hooklets were seen. It did not turn starch into sugar or emulsify fat. Inoculations on gelatin and agar proved sterile. Microscopical sections of the cyst wall were stained with hæmatoxylin. The sections consisted partly of fibrous tissue in several stages of growth and partly of a glandular tissue, showing tubular alveoli lined with cubical epithelium and a scanty amount of interalveolar tissue.

Remarks by Dr. RANDALL.—The term "pancreatic cyst" is perhaps open to criticism, for the deep relations of the tumour were only ascertained as far as was possible by two examining fingers inside its cavity, and although the deeper and upper part of the cyst lay just over the region of the pancreas I am not able to say whether there was structural connexion. The microscopical sections made by Mr. W. W. Farnfield showed fairly abundant acini of glandular tissue, which glandular tissue certainly strongly resembled that of the pancreas. The absence of amylolytic or emulsifying action in the fluid may well be accounted for by the free suppuration. I have to thank my colleague, Mr. Ernest A. T. Steele, for lending me his aid at the operation.

LEEDS GENERAL INFIRMARY.

A CASE OF OBSTRUCTED LABOUR; PORRO'S OPERATION; RECOVERY.

(Under the care of Mr. LAWFORD KNAGGS.)

IT would be difficult to magine a case in which Porro's operation could be more urgently required than in the one under consideration. The extreme contraction of the conjugate at the brim by itself made the prevention of future pregnancies extremely desirable; the presence of the two fibroids tended to point in the same direction; and in addition there was the intensely septic condition of the uterine contents. It can hardly be disputed that had the uterus been left septic infection would have almost certainly followed. The complete removal, therefore, of so large an absorbing surface by the same operation that fulfilled other important indications must be considered highly satisfactory. For the notes of the case we are indebted to Dr. C. H. Moorhouse, resident obstetric officer.

A woman, aged thirty-six years, was admitted to the Leeds General Infirmary on May 7th, 1898, and in the absence of Dr. Braithwaite came under the care of Mr. Lawford Knaggs. Her friends gave the following information. She had been in labour with her first child for five days and delivery had not been effected. She had first been under the care of a midwife, but subsequently two medical men, finding delivery impossible, had sent her to the infirmary. A leg had come away in the attempt at extraction. On vaginal examination the os could be reached high up in front of and above a hard rounded mass which occupied the hollow of the sacrum. A shaggy surface presented, in the centre of which the small cup-shaped acetabulum could be felt. The antero-posterior diameter at the brim was only 1½ in. There were large sloughing sores near the orifice of the vagina and the odour left on the finger was horribly offensive. On first entering the rectum the finger impinged upon the tumour which lay apparently behind the bowel, but as the upper part of the rectum was reached it passed to the left side of it. The tumour was smooth, rounded, and hard, and immoveably fixed. After emptying the bladder two smooth swellings could be felt in the abdomen. One was the pregnant uterus and the other in the right hypochondrium was solid and so freely moveable that it slipped about on the least manipulation. The patient's condition was poor, the pulse was 120, and uterine pains had been last felt as she was being driven to the infirmary. A diagnosis of impacted fibroid was made and it was clear that with a putrid fœtus the only operation that offered any prospects of saving the patient's life was the removal of the uterus with its contents. Mr. Littlewood who saw the case concurred and without delay the patient was put under ether and the abdominal surface rapidly and carefully prepared for operation.

The abdomen was opened by a median incision 12 in. long and the tissues were so thinned that with the first stroke of the knife the peritoneal cavity was opened and the uterus was slightly wounded. The uterus, together with the freely moveable tumour which proved to be a pedunculated fibroid, was lifted out of the abdomen until its progress was checked by a pedicle passing from it to a mass firmly wedged in the pelvis. With the application of greater force this mass—also a pedunculated fibroid—came away with a jerk. A large sponge was placed over the bowels and in the pouch of Douglas and a third assistant kept the lax parietes closely approximated and drawn firmly round the neck of the uterus. This viscus with its attached fibroids was held well forwards so that any escaping discharge would fall over the thighs and not over the abdomen. It was entered on its anterior surface, in part by the knife, but chiefly by the fingers, and the opening was enlarged downwards for 5 in. with scissors. The fœtus was grasped by the neck and extracted and the placenta, which was lying loose, came out with it. The uterus contracted. The hæmorrhage was trivial and there was no occasion to tighten the elastic tourniquet which had been placed in readiness round the pedicle. A serre-nœud was now applied just above the bladder which was somewhat displaced but fortunately conspicuous. The neck of the uterus was cut through 1½ in. above the wire, a pin was passed through the stump, and the exposed uterine mucous membrane was mopped with chloride of zinc solution (40 gr. to 1 oz.). The pedicle was fixed at the lower angle of the wound, the three parietal layers—viz., peritoneum, muscle, and skin—being separately attached by a few suitably placed sutures to the peritoneal covering of the cervix well below the serre-nœud. The object was to obtain a broad, firm adhesion between the abdominal wall and the pedicle and so securely protect the peritoneal cavity from contamination by discharges which would result from the sloughing of the stump. This done the sponge was removed from the abdomen and the incision was closed in the usual way in layers. Dressings were applied and the vagina was washed out with carbolic lotion. The pulse was 150 at the

close of the operation and ergotin, strychnia, and brandy had been injected during its progress.

The subsequent course was not uneventful. On May 10th, 11th, and 12th paralytic distension of the intestines and vomiting had to be energetically combated. When this was overcome the patient became troublesome and difficult to keep in bed and had delusions of a sexual character. This lasted through the 13th and 14th and then disappeared, and on the 15th a large slough came from the vagina and from that time the vaginal discharge lost its fœtor. The stump was cut away on the 25th and the next month was spent in the healing of the cavity left. By July 9th the wound had been soundly healed for a week and she left the Ida Hospital quite well.

The specimen.—The fœtus and the placenta were in a most offensive condition and much decomposed. The left lower limb was missing. The interior of the uterus was very foul and its mucous membrane was apparently gangrenous. The two fibroids were as large as cocoanuts and were attached to the body by short narrow pedicles.

Remarks by Mr. KNAGGS.—If there are various opinions as to the best way of dealing with cases of pregnancy in which delivery is rendered impossible by the presence of a removeable tumour, or with that other group in which the obstruction is permanent and the question of future pregnancies calls for consideration, there must be a general agreement as to the necessity for the removal of the uterus and its contents when the fœtus is known to be decomposing and delivery by the natural passages to be impossible. In Cæsarean section in these circumstances the fouling of the lips of the incision during extraction of the child and the immediate proximity of a highly septic surface can hardly fail to result in non-union of the uterine wound and in the establishment of a path of infection which must end in a rapidly fatal peritonitis. The case described above is a good illustration of the value of the more radical operation.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cysts in the Ventricles of the Brain.—Blackwater Fever.—Technique of Blood Films.—Pernicious Anæmia.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 20th, the President, Dr. PAYNE, being in the chair.

The PRESIDENT referred to the loss which the society had sustained by the death of Sir William Jenner who was President in 1873 and it was agreed that a letter of condolence should be sent to the members of his family.

Dr. E. F. TREVELYAN (Leeds) showed two Brains containing Cysts, the one in the third and the other in the fourth ventricle. In the first specimen the cyst, a little less than an inch in length and pear-shaped, had adapted itself to the anterior part of the third ventricle and was attached to the choroid plexus. It was of a greyish white colour and its contents were distinctly gelatinous. The symptoms had extended over six years with intermissions. In the second specimen there was a cyst in the fourth ventricle of about the size of a filbert. It lay free in the cavity of the ventricle. Death occurred suddenly after twenty-four hours of coma. Both these specimens were looked upon as examples of hydatid disease, but the examination of the first-named had not yet been completed. No evidence of parasitic disease was found elsewhere in the body in either case. Cysts in the ventricles of the brain might be parasitic in origin or be simple cysts of the choroid plexus. Parasitic cysts whether due to the echinococcus or cysticercus cellulosæ might lie free in the cavity of the ventricles or be attached. A single cyst of the choroid plexus, especially if of large size, should always be carefully examined as to its nature to see that it was not parasitic. Dr. Trevelyan also showed a Brain with Two Tumours at the Base; the one lay just below the velum interpositum and above the corpora quadrigemina which it had flattened out and the other in the floor of the third ventricle just above the optic commissure. He called it provisionally an angio-myxo-sarcoma.

Mr. W. H. CROSSE and Mr. W. C. C. PAKES communicated a paper on Blackwater Fever. A young officer who had served for fourteen months in Nigeria had several attacks of malaria whilst out there and came home suffering from his third attack of dysentery. He never had blackwater fever in Nigeria, but was attacked for the first time in England. The attack began apparently as an ordinary one of malaria, but after two days the symptoms of blackwater fever supervened. He had considerable pyrexia, was jaundiced, vomited green matter, and passed porter-like urine. The urine contained a fair quantity of albumin but only a few red discs. He had no quinine until six hours after the onset of the hæmoglobinuria. In spite of his improving under quinine he had a slight relapse of the hæmoglobinuria which disappeared whilst he was having still larger doses of quinine. The urine three days after the onset of hæmoglobinuria was pink in colour, gave a band of hæmoglobin, but not of urobilin. Sugar and bile pigments were both absent. Albumin was present to the extent of rather more than 1 part in 1000. There was an increase in the leucocytes and a considerable number of granular casts and renal cells. Only a very few red discs were present. Hæmatozoa were found in the peripheral blood; these, Mr. Crosse and Mr. Pakes thought, resembled the æstivo-autumnal parasite and not the ordinary quartan or tertian parasites. After the relapse the blood and urine were both again examined. No hæmatozoa could be found; there was a definite leucocytosis; and nucleated red discs were seen. The urine was similar to the previous specimen, but the casts and renal cells were much fewer. They thought this case had an important bearing upon the causation of the disease. Three alternatives appeared to be open. Firstly, that blackwater fever was unconnected with malaria or quinine; secondly, that it was caused by quinine; and thirdly, that it was connected with malaria. If the first alternative were true it would follow that the disease could be acquired in England or must have a latent period of over a month, since the patient had left Africa more than a month previously. Neither of these, they thought, was borne out in fact. That this case could not have been caused by quinine they were satisfied because, as had been stated, the blackwater preceded the administration of quinine by six hours. That the disease was connected with malaria was supported by the fact that hæmatozoa were found by them and had been found by other observers, notably by Plehn who considered that those found in blackwater fever differed in nothing from those found in the ordinary tropical African malaria. Further, the disease was only found to attack those resident in, or having resided in, tropical countries. Blackwater fever did not attack people who had not previously suffered from malaria. There appeared to them to be two alternatives as to the causation. In the first place there might be a special hæmatozoon which was responsible for the disease. Texas cattle fever was caused by a hæmatozoon and severe cases were marked by hæmoglobinuria. On the other hand Plehn's statement contradicted this idea. They thought that the most probable theory was that the hæmoglobinuric fever was really a complication of tropical African malaria, having similar relation to that disease which hyperpyrexia had to rheumatic fever. As in rheumatic fever, the hyperpyrexia was an added symptom which was unaffected by salicylates or alkalies, so the blackwater complication was superimposed upon malaria and required additional treatment. They referred to the notes on a case of blackwater fever published in THE LANCET of Dec. 3rd by Mr. F. P. Mackie. They did not consider the notes at all satisfactory. He had found parasites in stained films but had been unable to demonstrate them in fresh specimens. He noted the presence of an increase in the extra-corpuscular flagellated bodies in a mixture of blood and normal saline after two days and although he was unable to obtain permanent specimens of them was convinced that they could not be bacilli; Mr. Crosse and Mr. Pakes did not think that he had proved this. They pointed out that blastomycetes which were not saccharomycetes were quite common in the urine after exposure to the air. They pointed out the uniqueness of Mr. Mackie's case in that he demonstrated granular casts in a urine containing no albumin.—Dr. WASHBOURN said that the characteristic feature of blackwater fever seemed to be the presence of hæmoglobin in the urine, but the fact that there were also blood-cells present suggested that there was in this disease some further change in the kidney which allowed blood-cells to pass. He was of opinion that the disease was due to malaria and not to a different hæmatozoon, since the disease only occurred

in subjects who had previously suffered from malaria, and as in the pernicious form of malaria the parasites may fix on certain organs—for instance, the capillaries of the brain—and give rise to a condition simulating apoplexy, or the capillaries of the intestine may be attacked giving rise to a condition similar to cholera, so it was possible that the parasite might in this form of fever fix on the kidney and red marrow and produce the hæmoglobinuria. The fact that only a few parasites were found rather pointed to the fact that they were situated in one part of the body and did not become generalised.—Dr. ROLLESTON suggested that there was possibly some relationship between hæmoglobinuric fever associated with jaundice and the hæmoglobinuria occurring in malaria.

Mr. W. C. C. PAKES and Dr. R. HOWARD brought forward a short communication on the Technique of Blood Films. They pointed out the unsatisfactoriness of the "two cover-slip" method and showed how Dr. Manson's suggestion to make blood films with tissue paper could be adapted to cover-slips which were much more convenient than slides. They showed a special needle with which to prick the ear or finger for the collection of the blood and a clip with which to hold the cover-slips conveniently while making the films on them. They pointed out that carbol thionin blue which was recommended by Muir and Ritchie as a bacterial stain was an excellent double stain for blood, especially for the diagnosis of malaria and leucocytosis, and in tissue. They also showed a small case containing Ross's diagnostic microscope, but specially adapted without increasing its size to contain in addition all the requisites for examination of blood.

Dr. H. M. FLETCHER described an Unusual Form of Intestinal Lesion occurring in Pernicious Anæmia. The patient, a man, aged thirty-four years, was under the care of Dr. Hensley at St. Bartholomew's Hospital and presented all the clinical features of an extremely severe case of this disease. After temporary improvement he died and the appearances characteristic of the disease were found at the necropsy. Specimens of various organs were shown by Dr. Fletcher. The most interesting lesion was that found in the intestines, the whole of the colon and a small portion of the ileum being thickened, tough, and leathery and of a yellowish-brown colour. The mucous membrane showed a remarkable roughening and was covered with warty excrescences arranged in patches. Such changes in the colon have not hitherto been described as occurring in pernicious anæmia. During life there had been no symptom which bore any relation to the lesion. Microscopically there was a recent partial necrosis of the mucosa and an older fibrotic condition of the submucosa. There were intense hyperæmia and a few scattered hæmorrhages. No definite cause for these changes could be assigned. It was suggested that the older changes were probably of the same nature as those described by Hunter, Fenwick, and others as occurring in the stomach in pernicious anæmia. He negatived the idea that the condition was due to arsenic which had been taken, since the stomach and duodenum showed no change.—The PRESIDENT said that the fact that the duodenum and stomach were not affected did not negative the fact that the condition might be due to arsenic, since in antimony poisoning the effect falls altogether on the colon.—Dr. WASHBOURN instanced the action of mercury on the colon in the same connexion.

Dr. C. D. GREEN showed a specimen of Sarcoma of the Left Lung and Mediastinum from a girl, aged fourteen years, who three months before her death complained of general weakness and dyspnœa. There were physical signs over the left lung which Dr. Green associated with consolidation and contraction of the left lung consequent upon antecedent pleural effusion. Glands appeared above the right clavicle and the child emaciated with remarkable rapidity during the last days of life. At the necropsy a large malignant growth was seen to extend from the sternum to the vertebræ and from the xiphoid to the upper opening of the thorax. The arch of the aorta and great vessels was completely embedded in the growth. The left pleura was universally adherent and the left lung was seen to have been converted into a malignant mass which appeared to have grown from the hilum outwards. The growth on section proved to be a sarcoma and Dr. Green thought that it had probably originated in the glands at the hilum of the left lung.

Dr. E. F. TREVELYAN showed the following specimens:—(1) Encapsulated Growth in the Kidney; (2) Cholecystitis from a case of Typhoid Fever; (3) Calcareous Mass on the Mitral Valve; and (4) a Fibrous Tumour free in the Peritoneal Cavity.

MANCHESTER MEDICAL SOCIETY.

Renal Tuberculosis.—Tumour of the Pons.—Malignant Jaundice.—Development of Movements of the Hand in Infancy.—Peripheral Neuritis.

A MEETING of this society was held on Dec. 7th, Mr. G. A. WRIGHT, President, being in the chair.

Mr. T. JONES mentioned two cases of Renal Tuberculosis in each of which the kidney had been removed, both ending in recovery. The first case was that of a man, aged forty-three years. He had a tumour filling the left side of the abdomen. Its contour was distinct; notching of its lower margin, together with absence of anything abnormal in the urine, led to the diagnosis of a splenic tumour. Exploration by an anterior incision showed its renal origin. Removal was followed by complete recovery. The second case was that of a man, aged twenty-one years, who was admitted with a large right lumbar abscess which was opened and drained. Five weeks later, after some improvement in the patient's general condition, the diseased kidney was removed through the loin. Besides the disease in the kidney there was a large and hard tuberculous nodule in the right epididymis. The corresponding vesiculæ seminales and prostate were also diseased. The patient was shown to the meeting in the enjoyment of excellent health.

Dr. DIXON MANN described a case of Tumour of the Pons of which a minute pathological investigation had been made by Professor Delépine. The earliest symptom was a humming noise in the left ear; this continued until death which took place two and a half years afterwards. Ptosis occurred early and then disappeared; it subsequently recurred and persisted. During the later stage the patient had repeated attacks of tonic spasms and on one or two occasions epileptiform seizures. The right arm and right leg were spastically contracted and devoid of motive power. Professor Delépine found that the tumour was a round-cell sarcoma situated in the left crus; it involved all the cranial nerves excepting the first and the ninth, but the third was the only one which showed marked indications of physical changes; it was atrophied, its diameter being only two-thirds that of the corresponding nerve on the right side.

Dr. HARRIS related a case of Malignant Jaundice (Typhoid Icterus) and showed preparations from the liver of a man, aged fifty-seven years, who had died from jaundice associated with nervous symptoms and the typhoid state. The patient had been ill seven weeks before admission to the hospital and died six days after he had come under Dr. Harris's observation. The chief symptoms during the six weeks previously to his admission to hospital had been pains in the limbs and pains in the abdomen and vomiting. The jaundice had been present about eight days before admission and was extremely intense when the patient was admitted to the infirmary. Shortly after admission low muttering delirium with picking at the bed-clothes came on; the tongue was dry and brown and there were sordes on the teeth; the stools were clay-coloured; the urine contained bile and a few sheaves of tyrosin were obtained from several specimens but no leucin could be obtained. The liver dulness was slightly increased in size; there was no enlargement of the spleen. The urine contained a doubtful trace of albumin. The patient became comatose, urine and fæces were passed unconsciously, and he died about six days after admission or about eight weeks after the onset of his illness. At the post-mortem examination the body was found to be intensely jaundiced. There was no lesion in the intestinal canal, there was no obstruction at any part of the bile-ducts, and the gall-bladder contained a little dark reddish-brown bile. The liver weighed 3 lb. 10 oz., was slightly more friable than usual, but showed no sign of yellow or red atrophy, and with the exception of being bile-stained presented no unusual features to the naked eye. Microscopically the liver cells were of somewhat peculiar shape, slightly cloudy, but the most obvious change was that the nuclei showed marked evidence of active proliferation and stained unusually well with logwood. The other organs of the body presented nothing unusual with the exception of being bile-stained.

Dr. ALFRED MUMFORD read a paper on Development of Movements of the Hand in Infancy. He said that limb movements might be classified as those of locomotion; of prehension, where the thumb was inactive or acted with the fingers; and of manipulation, in which the thumb acted apart from the fingers and the hand could be supinated.

Infantile movements were mainly involuntary and inherited and with these inherited movements were those of reflex action, instinctive and so-called spontaneous movements. Movements of manipulation were mainly acquired and voluntary. Independent use of the thumb with the power of supination so characteristic of manipulation began about the fifth month and was fully developed by the twelfth month. There were, however, still many inherited and instinctive movements which did not appear till later—e.g., walking. Swimming movements seemed natural to the human being and were partly at least inherited and not purely acquired movements since the human infant could be, and was, taught to swim in the very early months of life in many of the Pacific Islands, the Sandwich Isles, and in Siam. Photographs and drawings of the several movements described were shown to the meeting.

Dr. EDGE mentioned some cases of Peripheral Neuritis. Two of them were due to the use of alcohol and one to diphtheria; these were compared with three others which were caused by the toxin of beri-beri.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE third meeting of the session of this society was held in the library of the Royal Infirmary, Newcastle-on-Tyne, on Dec. 8th, Mr. RUTHERFORD MORISON, Vice-President, being in the chair.

Dr. A. E. MORISON showed:—1. A patient, aged twenty-two years, who had noticed a Lump at the Root of the Neck for the past two years. A skiagram proved this to be due to a cervical rib over which the subclavian artery ran. On the opposite side the transverse process was elongated. 2. A New Method of Preparing Catgut. After immersing in ether for twelve hours the catgut is wrapped upon glass and placed in a 5 per cent. solution of formalin for twenty-four hours, then under running water for twelve hours, and lastly dried. It may be kept in this condition and immediately before use boiled, or it may be kept permanently in a 1 in 2000 solution of corrosive sublimate in methylated spirit. The advantages claimed were absolute sterility and maintenance of the strength of the catgut.

Dr. G. R. MURRAY brought forward:—1. A case of Friedreich's Ataxia in a male, aged eighteen years, whose sister, aged twenty-two years, also suffering from this disease, was in the hospital under the care of Dr. Oliver. The case presented decided mental deficiency; nystagmus was very evident; the pupils, however, readily reacted to light; the usual irregular muscular contractions were present and most marked in the muscles of the face and neck; the gait was extravagantly ataxic but the knee-jerks were not absent. Dr. Oliver's case, presenting similar symptoms, was also shown to the meeting. 2. A case which Dr. Murray considered illustrated the relationship between General Paralysis and Locomotor Ataxia. This patient twelve years ago suffered from plumbism and two years ago from rheumatoid arthritis; twelve months ago he had a left-sided hemiplegia. He now presented some loss of power in the left side; speech was somewhat indistinct, and the pupils were unequal. The marked incoördination, however, was more evident on the right side. The right hip and great toe-joints showed extensive Charcot's disease.—Dr. GORDON BLACK and Mr. RUTHERFORD MORISON discussed the joint changes.

Dr. H. P. BENNETT exhibited a patient with Optic Atrophy following injury. This man, after being unconscious for one hour from a severe accident due to a fall of stone, vomited a large quantity of blood and presented marked swelling of the right eyelids. On the subsidence of the swelling there was absolute blindness of the right eye with optic atrophy and anæsthesia of the skin below the orbital margin. The explanation offered was a fractured base extending into the optic foramen and sphenoidal fissure.

Dr. PAGE reported the case of a man upon whom he had recently operated by extirpation for Arterio-venous Aneurysm in Hunter's canal. The patient eight years ago had stabbed himself by accident in the right thigh causing profuse bleeding which was arrested by a pad and elastic bandage. In a few days the wound had healed, but pulsation was at once noticed and together with swelling gradually increased. Lately increased pulsation and thrill had caused loss of sleep. On examination a pulsating and expansile swelling as large as a fist was found in the site of Hunter's canal. The thrill and bruit characteristic of arterio-venous communication were heard over the sac and along the course of the femoral vessels. There was no enlargement of the superficial veins or œdema of the foot. On Nov. 16th the sac, together with portions of both artery and vein involved, was completely removed, catgut ligatures being used. The patient made an uninterrupted recovery and at no time was there cause for anxiety as to the safety of the limb.

Mr. RUTHERFORD MORISON described his Method of Treating Fractures of the Tibia and Fibula as follows: without attempting to set, the fractured leg was put up for ten days with plenty of packing in Gooch splinting. This temporary splint was then removed and the bones and callus were moulded into shape and position. The limb was then put up in plaster-of-Paris. Two patients having been so treated showed excellent results.

Mr. ANGUS showed a patient four years after Removal of the Penis and Infected Glands which on microscopic examination had been proved to be epithelioma. There was no recurrence.—Mr. RUTHERFORD MORISON, Mr. MARTIN, and Mr. LYON SMITH commented on the improved statistics for malignant disease after radical operations.

The following specimens were exhibited:—

Dr. MODLIN: Suppurating Dermoid Cyst.

Dr. G. R. MURRAY and Mr. HARDCASTLE: (1) Stained Slides illustrating the stages of Widal's reaction for enteric fever; and (2) Case with Tubes for sending specimens for bacteriological diagnosis.

Dr. G. R. MURRAY: New Pillow Sling.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Tuberculous Tubes.—Abdominal Section.

A MEETING of this section was held on Nov. 25th, Dr. E. H. BENNETT, the President, being in the chair.

A discussion took place on Dr. Macan's case of Tuberculous Tabes.—The PRESIDENT said that although the pus extravasated into the cavity of the peritoneum may not have had any pathogenic organisms in it, yet if it escaped from ovaries which were masses of tuberculous degeneration it was hardly to be desired that it should be left in the cavity of the peritoneum, and he therefore thought that drainage was advisable in this case.—Dr. JELLETT said it was a mistake to think that because pus was sterile there was no necessity for drainage, as pus, though sterile, might cause subsequent suppuration owing to saprophytic changes. The degree of virulence might sometimes be such as to establish suppuration without bringing on peritonitis which would kill the patient. He thought that drainage was advisable in all cases except where the patient's condition was absolutely hopeless.—Dr. H. C. TWEEDY said this case exhibited the immunity that patients who are suffering from suppurating tumours have to sepsis; in his experience, when the tumour bursts into the abdominal cavity the patient seldom gets sepsis and the fact that the pus is fœtid does not make the prognosis worse. Of course he supposed that the germs had died, but the fact that the pus was fœtid showed that germs had been there and that therefore there were dangerous toxins in the pus. He therefore thought that not to drain the abdomen would have been to run a great risk of leaving toxic pus in it.—Dr. MACAN, in replying, said that he could not understand how a piece of gauze stuffed through the posterior cul-de-sac of the vagina could drain between the intestines. He knew that pus sometimes was sterile, but investigation showed that it took about eighteen months for a tube case to become sterile.

Dr. ALFRED J. SMITH described a second series of 100 Cases of Abdominal Section, including operations performed under circumstances as follows: 39 times for ovarian tumours; 4 times for the separation of adhesions; 9 times for exploratory purposes; 21 times for the cure of fibro-myomata; once to enucleate a broad ligament fibro-myoma; 4 times for tubal pregnancies; 4 times for the radical cure of ventral herniæ; 4 times for double pyosalpinx; once for appendicitis; once for double hæmatosalpinx; once for enucleation of mesenteric cyst; once for Porro's operation; twice for salpingo-ovaritis; twice for hydrosalpinx; and once for the enucleation of a broad ligament cyst. The peritoneal

cavity was opened twice in performing anterior colpotomy and 3 times in performing posterior colpotomy. As to the treatment of fibro-myomata he was not in a position to dogmatise, but he felt it his duty not to accept the simple fact of the presence of a tumour as a sufficient indication for operation; he must be satisfied that its continued presence was in some way or other a menace to life or that its presence was incompatible with a comfortable existence. Enucleation was performed twice, myomectomy 6 times, panhysterectomy twice, retro-peritoneal hysterectomy 8 times, and double oöphorectomy 3 times, making in all 21 operations without a death. Dr. Smith also read notes of the *technique* which he employs in performing retro-peritoneal hysterectomy, and notes on the after-treatment of cases of abdominal section. Taking the first series of 50 cases and the present one of 100 he performed 150 abdominal sections with only 2 deaths, or a percentage of only 1·3 per cent. nearly.—Mr. TOBIN described how the surgeons of St. Vincent's Hospital had all arranged to operate in the same way and if a change was to be made in any details the surgical staff met together and rejected or adopted the proposed change. He thought that this was an admirable arrangement for all concerned.—The PRESIDENT and Dr. MACAN also discussed the paper and Dr. SMITH replied.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on Dec. 15th, the President, Dr. Macfie Campbell, being in the chair.—Dr. J. E. Gemmell related a case of Sudden Death from Complete Thrombosis of the Basilar Artery occurring on the twelfth day after a normal parturition. The patient was in the Lying-in Hospital, was aged forty years, primipara, and the perineum was torn at the labour; this was repaired at once and healed by first intention. She suffered from insomnia for the first four days and the temperature reached 100° F. on the third, fifth, and seventh days; the pulse was 76. On the seventh day the nurse reported a "short fit," twitching of the muscles of the face and limbs, followed by a short period of unconsciousness. On the twelfth day the patient died suddenly whilst taking a cup of tea. Post mortem all organs were found to be healthy, but the basilar artery was completely thrombosed. There was nothing to suggest septic mischief. The uterus was 6 in. long from the cervix to the fundus. Many cases of sudden death were recorded from ten to fourteen days after labour and there being no post-mortem examination were generally put down as pulmonary thrombosis.—Mr. G. G. Hamilton showed a male child, aged three months, on whom he had operated twenty-four hours after birth for Atresia of the Rectum. Neither urine nor fæces had been passed. There were atresia of the rectum, no trace of an anus, some hypospadias, and an imperfectly developed urethra. The rectum was found high up and some days later a urethra was made. Through the urethra fæces at first came, but now the child passed urine and fæces in a natural manner.—Dr. T. R. Glynn read notes of a case of Infective Heart Disease.—Mr. Hawkins-Ambler traced the history of the procedure and the methods of using Saline Irrigation in Abdominal Operations as a hæmostatic and for the purposes of lavage. He discussed the indications for its use and avoidance. He pointed out the advantages of saline irrigation in minimising inflammatory exudations after operation and relieving that inspissation of the blood shown in its increased specific gravity which caused increased peripheral resistance and more or less circulatory embarrassment. The absorptive capacity of the peritoneum was discussed and it was contended that irrigation lessened shock by protecting the peritoneum and assisted its efforts to combat septic influences. Post-operative uses of irrigation were mentioned as a treatment in commencing peritonitis, in pseudo-ileus, and in relieving intestinal obstruction in early stages when caused by slight adhesion. A case illustrating this use was mentioned. An analysis of the use of irrigation in 30 cases of abdominal operations was presented.—Mr. Alexander used irrigation only in special cases and always used sterilised water. For hæmorrhage he would be afraid to use water hotter than 100° F. and certainly would not use water at 120° in the abdominal cavity. He preferred perchloride of iron as a hæmostatic for oozing. For shock he thought it better and safer to use saline solution injected per rectum or in extreme cases into the cellular tissue of the axilla.—Dr. Briggs considered that simple irrigation and drainage conducted with care were harmless. Lord Lister had shown in wounds the vast differences between gross and mild infection and between organisms without and within the tissues. It was not necessary to go beyond those differences in estimating the value and use of irrigation and drainage.—Professor Sherrington and Mr. E. T. Davies also spoke.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held in the University College, Dundee, on Dec. 2nd, Dr. J. Mackie Whyte, Vice-President, being in the chair.—Dr. Whyte showed a boy, aged twelve years, who was admitted in June, 1896, to the Dundee Infirmary for ascites. He had been a delicate child and had suffered from a chronic otorrhœa—otherwise there was nothing marked till the onset of this illness six weeks previously. There was evidence of lardaceous disease in the liver, spleen, kidneys, and intestines. In the liver too there seemed to be deep fibrous constrictions. The abdomen was tapped repeatedly till October, 1897; the amount of fluid drawn off latterly was 324 oz. in nine days. The urine up to that time was very scanty, but after the tapping in October it suddenly increased in quantity and the fluid ceased to gather in the peritoneum. The cause of the disease was apparently the otorrhœa, syphilis being excluded with a fair degree of certainty.—Dr. Whyte also showed a Brain from a case of Purpura with Hæmorrhage into the Base which seemed to have begun at the optic thalamus. The patient had numerous hæmorrhages all over the body. There were no symptoms localising the cerebral hæmorrhage from which she died.—Mr. D. M. Greig showed part of a Catheter removed by Suprapubic Cystotomy from the Bladder of a man, aged sixty-three years, suffering from an enlarged prostate.—Dr. J. A. Kynoch showed a specimen of Gonorrhœal Salpingitis and Abscess of the Ovary removed by cœliotomy.—Dr. Kynoch also read a paper on the Recent Improvements in the Treatment of Vesical Fistulæ. In this paper he described the various operations suggested and performed during the last fifty years for the treatment of small, medium, and large fistulæ where there was destruction of tissue. He gave notes of a case under his own care in which he had obtained a successful result by paring and suturing the edges of the fistula. Lastly he dealt with vesico-uterine fistulæ, in the treatment of which he thought that when closure of the os uteri was the only available treatment the ovaries might be removed at a subsequent operation.—Professor MacEwan, Mr. D. M. Greig, Dr. Buist, and the Vice-President all spoke on the paper.—Dr. Kynoch briefly replied on the discussion.—Dr. MacGillivray communicated a short paper on the Treatment of Iritis in which he emphasised the importance of the early and energetic use of atropine combined with cocaine in the form of an ointment. This ointment he recommended should be applied every hour or oftener till all synechiæ were broken down. He also advocated the internal administration of mercury, hot fomentations, and leeches to the temples to allay severe pain.—Dr. A. J. Duncan spoke on the internal treatment which he did not think was sufficiently emphasised in the paper.—The Vice-President also spoke.—Dr. MacGillivray, in reply, said the paper did not aim at, though approving of, etiological treatment.

BRITISH ORTHOPÆDIC SOCIETY.—The annual general meeting of this society was held at the Westminster Hospital, S.W., on Dec. 9th.—Dr. Wohlmann, Dr. Bennett, and Dr. Melsome were elected members of the society. Mr. Freer, Mr. Robert Jones, and Mr. William Thomas were elected members of council. A vote of thanks to Mr. E. Luke Freer for his services as provincial secretary was carried unanimously.—An ordinary meeting followed at which Mr. Horrocks Openshaw's paper on Tendon Re-implantation, adjourned from the last meeting, was read. He defined the proceeding as the transference of the tendon of a healthy muscle from its normal situation and its attachment, implantation, or grafting upon the tendon of a muscle more or less completely paralysed. He gave a history of the subject and a *résumé* of cases recorded which showed that almost every tendon near the ankle had been utilised to strengthen every other muscle when paralysed, and that the sartorius had successfully been employed by Goldthwait as a substitute for the quadriceps. He had found the results of grafting the peronei into the tendo Achillis for talipes calcaneus excellent. In several cases of paralysis of the tibialis posticus he had grafted the peroneus longus or brevis into it with satisfactory results. As a general rule in tendon grafting

a muscle should be selected the action of which nearly resembled that of the paralysed one, but this was not always possible. In some cases it was advantageous to take an antagonist that was causing distortion, but care must be taken that too much was not done and an opposite deformity produced. Distortion ought previously to be removed by operation and instrumental treatment. Strict asepsis was a *sine quâ non*. The tendons should be disturbed as little as possible and as large surfaces of tendon applied to one another as possible, and they should be very firmly united by sutures that would not rapidly be absorbed. Stout catgut he considered the best material. Kangaroo tendon could hardly be sterilised by ordinary methods and silk often gave rise to stitch abscesses and troublesome sinuses.—The meeting terminated with a vote of thanks to the committee of the hospital for the use of their boardroom.

BIRKENHEAD MEDICAL SOCIETY.—A meeting of this society was held on Dec. 9th, Mr. H. Nazeby Harrington, President, being in the chair.—Dr. Temple showed two children with Congenital Defects of the Forearms and Hands.—Dr. R. Owen Morris showed a woman with Abdominal Tumour (for diagnosis).—Mr. Herbert Butcher opened a discussion by reading a paper on the Causation, Differential Diagnosis, and Treatment of Torticollis, first dealing in a thorough manner with the action of the muscles which would be involved in certain deformities and the necessity of differentiating which muscles were actually at fault in any special case, so that, a correct diagnosis having been arrived at, manipulation of the head might be employed in the proper direction and massage of the faulty muscles employed. In obstinate cases when milder measures had failed the minor operation of tenotomy was advocated and the operation recommended by Mr. Butcher was the open method in preference to the subcutaneous and in girls the high operation on the sterno-mastoid—viz., the incision being made round the auricle and the muscle divided at its insertion into the mastoid process. After tenotomy of this muscle the head should at once be placed in the correct position and retained there by a retentive apparatus and if it was found impossible to replace the head it should be forced into position during anæsthesia. In the spasmodic variety Mr. Butcher insisted that nothing seemed to avail but operation and recommended an early resection of the spinal accessory nerve at the anterior border of the sterno-mastoid muscle and even if retro-collic spasm existed no further operation should be undertaken for at least a couple of months, as in these cases the simple resection of the spinal accessory nerve had been known to result in cure. If this should not occur then the sub-occipital triangle should be exposed and the great occipital nerve with the first, second, third, and fourth nerves would come into view and one or more of them might be dealt with if necessary. Mr. Butcher quoted cases where one or more of these posterior cervical nerves had been resected with brilliant success.—The following took part in the discussion: Mr. Vacher, Mr. Laird Pearson, Mr. Dixon, Mr. Ellis Pearson, and the President.—Mr. Butcher replied.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held in the Medical Library of University College, Bristol, on Dec. 14th, Dr. Roxburgh being in the chair.—Dr. C. Elliott showed a patient with Lichen Ruber Planus. Dr. Waldo and Dr. A. J. Harrison spoke on the subject.—Dr. Michell Clarke showed a case of Acromegaly.—Dr. E. C. Williams showed the following patients: (*a*) cases treated by the localised application of superheated dry air; (1) a case of Stiff knee; (2) a case of Rheumatoid Arthritis; and (*b*) a case of Alopecia Areata treated by the oxygen cap.—Dr. Rogers, the President, Dr. J. Swain, Mr. Paul Bush, Dr. Carey, Dr. Elliott, and Dr. Waldo remarked on the cases.—Mr. C. A. Morton showed a large Sarcoma of the Kidney successfully removed from a young child.—Mr. R. Williams and Dr. Carwardine discussed the specimen.—Dr. J. O. Symes showed a microscopic specimen of Tetanus Bacilli in Pus and a lantern slide of the same specimen.—Dr. Michell Clarke showed a microscopic specimen of the Malaria Parasite and illustrated his remarks by some carefully prepared lantern slides.—Dr. J. Swain showed a specimen of Double Pyosalpinx.—Dr. W. C. Swayne read a paper on Symphysiotomy with notes of a case.—Dr. J. G. Swayne and Mr. Morton commented on the paper.—Mr. Munro Smith showed a large number of lantern slides illustrating the pathology of Rodent Ulcer, explaining each slide as it was thrown on the screen by the oxy-hydrogen light; his interesting remarks on the subject raised a long discussion in which Mr. Morton, Mr. Williams, Dr. Edgeworth, and Dr. Michell Clarke took part.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Dec. 16th, the President, Mr. D. H. Goodsall, being in the chair.—Dr. B. G. Morison read notes of a case of Appendicitis in a man, aged twenty-six years, whose symptoms were of sudden onset. At the end of the acute attack—the seventh week—Mr. A. Quarry Silcock did a lateral laparotomy when he removed the appendix containing hard, light, black concretions and stitched a peritoneal flap over the stump. Recovery was complete.—A general discussion followed.—Mr. Reginald Brown read notes of a case of Recurrent Clonic Spasm of the Abdominal Muscles in a man, aged thirty-three years, convalescent from pneumonia. In the first attack morphine checked the spasm completely in 2 days. A relapse took place in 10 days when the extensors of the thigh were involved.—Mr. Brown also showed a Larynx from a man, aged forty-five years, an alcoholic, who was suddenly affected with cough, alteration of voice, and dyspnœa, which rapidly increased as did the submaxillary swelling. Tracheotomy was done. Five hours later his pulse was 140 per minute and a few hours later he died on the beginning of the third day.—Mr. F. Hewitt Oliver showed a specimen of Red Hepatisation of the Lower Part of the Upper Lobe of the Right Lung from a boy at work on Monday, ailing on Tuesday, and dead on Wednesday.

Reviews and Notices of Books.

Orthopædic Surgery. By JAMES E. MOORE, M.D., Professor of Orthopædia and of Clinical Surgery in the College of Medicine of the University of Minnesota, &c. With 177 Illustrations. London: The Rebman Publishing Co. Philadelphia, U.S.A.: W. B. Saunders. 1898. Pp. 354. Price 14*s*.

ORTHOPÆDIC surgery is of modern origin. Attempts had been made from time to time to remedy some of the more marked deformities, but as they were made without any exact knowledge of the true pathology of the conditions which were to be remedied the attempts were nearly always utter failures. Then followed the era of the instrument-maker and the complexity of the machines which were devised to remedy deformities was only equalled by their uselessness. In more recent times a more hopeful practice has prevailed, for it has been recognised that orthopædics are only a part of general surgery, yet a part for the successful practice of which a special knowledge and a special training are required. Orthopædic departments and lectures now exist at many general hospitals and these are likely to be more beneficial than special orthopædic hospitals for students are more likely to profit by their teaching. Even nowadays too many surgeons think that they have done all that is required of them when they send an orthopædic case to an instrument maker. They themselves should provide the measurements and the details of the instrument which is to be made, and unless they can do so they should not attempt to treat these cases. We extend a cordial welcome to Dr. Moore's treatise which is before us, for it is evidently written by one who is well acquainted with the subject with which he deals. The book is written by a general surgeon who has charge of a special department, and therefore we obtain, as we might expect, a satisfactory mean between too much and too little operating in orthopædic cases. The work is clearly written, amply illustrated and excellently printed.

The exact bounds of orthopædics have never been traced and as time goes on its borders will certainly extend, but at the present time the subject may be said to include all deformities of bones and joints, and that is practically what we find in Dr. Moore's book.

The author is an enthusiastic advocate of plaster-of-Paris, and his cautions as to its quality and use are worthy of attention in this country where there appears to be a tendency to discontinue its use for spinal jackets as being not satisfactory. He advises that the very best plaster should always be employed for it sets more quickly and more firmly than the cheaper kinds; the ordinary commercial plaster, he tells us, is utterly unfit for use as it will not set within a reasonable time and is heavy and unmanageable. He does not consider a "dinner pad" necessary, but we are not informed why, for variations in the size of the abdomen of no small extent do occur in connexion with food. In severe cases in which the deformity is increasing the author recommends complete rest in bed, and he has seen pale, emaciated little patients, apparently on the verge of the grave, changed in a few weeks into well-nourished, healthy-looking children merely by perfect rest. The best results are to be obtained by keeping the patient completely in bed. Dr. Moore mentions that the form of spinal support which is most frequently sold by instrument-makers is one which depends for its usefulness upon crutches making pressure in the axilla; this form of instrument is worthless, for light pressure under the ever-moving shoulders does not afford support and heavy pressure cannot be borne.

A very good account is given of the treatment of talipes, but we were a little surprised to find the statement that some English surgeons after performing tenotomy still put up the foot in the deformed position and gradually overcome the deformity later. We are not aware of this practice being followed by any English surgeons at the present time. We fully concur in the author's views as to the shape for a tenotome; the ordinary knife has a blade much too long, for its cutting edge is very liable to damage the skin while the tendon is being cut.

Osteoclasis is nowadays very little employed in the treatment of genu varum; Dr. Moore, however, speaks of it as "perfectly safe and very satisfactory." He employs Rizzoli's osteoclast and claims that with ordinary care abrasions of the skin do not occur. He does not recommend it for genu valgum, for he considers it is neither so safe nor so satisfactory as osteotomy owing to the proximity of the joint.

Coxa vara is fairly well described, but it deserves more attention than the three pages devoted to it, for it is probably much commoner than it is usually thought to be. In the treatment of congenital dislocation of the hip the author is inclined to advise first a trial of Lorenze's bloodless method and then should that fail an attempt may be made by a cutting operation to replace the head of the bone in the acetabulum artificially deepened.

The Housing of the Working Classes Act, 1890, and Amending Acts. By CHARLES E. ALLAN, M.A., LL.B., of the Inner Temple and Western Circuit, Barrister-at-Law, assisted as to Practice by FRANCIS J. ALLAN, M.D. Edin., D.P.H. Cantab., Medical Officer of Health to the Strand District Board of Works. London: Butterworth and Co. 1898. Price 7*s.* 6*d.*

ALTHOUGH the Housing of the Working Classes Acts were enormously simplified by their consolidation in the Act of 1890, this latter is in itself sufficiently voluminous and, withal, complicated as to justify the production of a separate volume dealing with its enactments and with the decisions already delivered in regard to them. Mr. Allan has endeavoured to present us with such a work and it must be conceded that his efforts have been for the most part a success, the present volume being convenient both in size and shape and its contents being well arranged. The text of the principal Act and of the four short amending Acts is given, of course, in full, and it is interpolated with clearly expressed explanatory notes. There is, too, a table of cases which cannot fail to be of material assistance to those who have officially to advise local authorities and who have to interpret the exact meaning of certain sections in the light of decisions given in relation to them. The introduction forms a capital summary of the provisions of the several parts of the Act, and this in spite of the fact that the revision of this part of the work has not been altogether perfect; for instance we read on page xxxv. that the ratepayers may appeal to the "Local Government" when obviously the Local Government Board is meant. The appendix contains the several prescribed forms and also the circular of the Local Goverment Board as to provisional orders and as to instructions as to applications for such orders. The index is concise and useful.

LIBRARY TABLE.

Who's Who? 1899. Edited by DOUGLAS SLADEN. London: Adam and Charles Black. Price 3*s.* 6*d.*—*Who's Who?* is improving and this is much to say of any book of reference, although books of this class must improve if they desire to keep their place. There are a great many new features of interest, such as a table of American ladies bearing English titles. Among the addenda are some particulars of the Right Hon. Cecil Rhodes, Mr. F. R. Harris, and Dr. Leyds. There is information of all sorts and kinds and altogether the book will prove exceedingly useful.

A Manual for Students of Massage. By M. A. ELLISON. London: Baillière, Tindall, and Cox. 1898.—Massage properly used is undoubtedly a valuable therapeutic agent. Like electricity, however, it has been so abused by quacks and swindlers that it is still looked upon with a certain amount of suspicion, and any book dealing with the subject not written by a medical man is somewhat discounted. The manual under review, however, seems to us to be a clear account of the various manipulations employed in massage and Miss Ellison has been careful to lay stress upon the fact that no case should be undertaken without medical permission at least, if not medical supervision. This of course is an essential, for the neglect of this canon has perhaps done more than anything else to bring massage into disrepute. The book is illustrated by clear and simple anatomical diagrams indicating the position of the chief muscles. It should prove useful for the class of persons for whom it is intended. Mr. H. H. Hulbert, M.R.C.S., L.R.C.P., supplies a preface in which the medical points of the book are shortly dealt with.

Flash Lights on Nature. By GRANT ALLEN. London: Geo. Newnes, Ltd. 1899. Price 6*s.*—These are a series of papers upon sundry subjects in natural history. Many, if not all, of the essays have already appeared in the *Strand Magazine* but they are quite worthy of being reprinted. We like Mr. Grant Allen far better as a natural historian than as a hilltop novelist, for in these papers we find the observation and fancy which gave us "The Revd. John Creedy" and "Palinghurst Barrow." Insects, plants, birds, and spiders form the groundwork of Mr. Allen's pictures. He tells us all about aphides and their relations to ants and he takes us through the life-history of a spider. Has any one by the way ever considered what an appalling monster a spider would be if it were of the same relative size to a human being as it is to a fly? A creature with eight legs all armed with claws, eight eyes, a mouth provided with two great fangs secreting a deadly venom, and the power of spinning a snare all smeared with a sticky substance. Imagine a wretched man struggling in one of these death-traps. We are glad to see that Mr. Allen has a word of praise for the earwig. It is a not altogether undeservedly maligned creature but withal a most interesting one. Its

life history and the method by which its wings are folded up go far to redeem its bad character—which we own with sorrow it deserves—of damaging flowers. Mr. Enock's admirable illustrations help to make his collaborator's text plain at a glance; not that we mean by this that Mr. Grant Allen writes unintelligibly, but "things seen are mightier than things heard." The book will make an admirable gift for any person who cares for country life, and even for the town dweller it will be useful, for he can see many of the subjects dealt with in the parks and open spaces.

Traité Pratique de Radiographie et de Radioscopie: Technique et Applications Médicales. (A Practical Treatise on Radiography, Radioscopy, and their Medical Applications.) Par A. LONDE. Paris: Gauthier-Villars. 1898. Pp. xii. and 244. Price 7 francs.—In this comprehensive work M. Londe, who is at the head of the photographic and radiographic department of the Salpêtrière, gives many fine reproductions of radiographs of bones not only in normal subjects but in malformations and also when presenting lesions due either to injury or disease. In undeveloped persons the progress of ossification may be observed and two interesting examples of this kind are illustrated, one of them being the hand of an Egyptian mummy which from the state of the ossification was inferred to be that of a child eight years of age. The other case was that of a male patient, nineteen years of age and 41 in. high, admitted to the Salpêtrière with myxœdema. Ossification was hardly more advanced than in a child of two or three years, but after five months' thyroid treatment he was 1¾ in. taller and the radiographs taken then showed the bones of the hands and feet to be much better ossified than on the former occasion. In the chapter on foreign bodies embedded or swallowed, in addition to the ordinary method of passing the rays through the part in directions at right angles to each other, M. Londe describes four special contrivances for assisting the observer. One is a device of his own, a boxwood triangle with metallic pins projecting from it, which are photographed at the same time as the foreign body. Two of the other methods require the simultaneous use of two vacuum tubes; they have been suggested by M. Brunel and Dr. Foveau de Courmelles and by Dr. Mergier. Various contrivances for use with fluorescent screens are shown and there is an illustration of Dr. de Bourgade's clinical table on which an infirm patient may be laid; being hinged it can be inclined to a considerable extent and the observer can sit on a low chair underneath it when either using the fluorescent screen or placing photographic plates in position. The chapters on sources of electricity, various kinds of vacuum tubes, screens, &c., are tolerably full and altogether the book is one which can be recommended.

JOURNALS AND REVIEWS.

IN the December number of the *British Journal of Dermatology* the original part is entirely taken up with the report of an interesting debate on general exfoliative dermatitis, introduced by Dr. Walter Smith at the Dermatological Society of London. It is valuable as giving the views upon this serious disease of the skin held by some of the leading British dermatologists. The quarterly survey of dermatological literature and the report of the Dermatological Society of Great Britain and Ireland complete the number.

Archiv für Dermatologie und Syphilis. Band xlvi., Heft 3. (*Archives of Dermatology and Syphilis.* Vol. xlvi., No. 3.)—This number contains an article by E. Doctor on the Relationship of Darier's Disease to Ichthyosis, in which he concludes—(1) that Darier's disease is connected with the hair follicles and sweat gland ducts with hyperkeratosis; (2) that it is generally but not always associated with hyperkeratosis, and that the so-called Darier's bodies are partly evidence of the parakeratosis but do not form a feature peculiar to the disease, as they may occur in other kinds of cell degeneration; and (3) that Darier's disease is a variety of ichthyosis from which clinically it may be distinguished by its localisation and by the presence of Darier's papules and histologically by the proliferation of the papillæ and of the rete Malpighii. J. Schutz writes on the occurrence of leucoplakia oris in psoriasis and other dermatoses and gives the evidence contained in dermatological literature that psoriasis may attack mucous membranes. H. Apolant has a long paper on Antipyrin Eruptions, the literature of which is sufficiently formidable, amounting to four closely-printed pages of references. H. Napp and C. Grouven conclude the original articles with the results of the TR. Tuberculin treatment in the Dermatological Klinik at Bonn. Their experience, like that of others, is that while it exercises a beneficial influence on the tuberculous processes, too often the good effect does not last and the disease returns. At the same time whatever benefit accrues is not accompanied by injury to the rest of the organism. The remainder of the number contains the usual reports of German dermatological societies and abstracts from recent literature.

Scottish Medical and Surgical Journal.—In the December number Dr. Alexander James (Edinburgh) gives clinical details regarding 4 cases of Tuberculous Neuritis, the parts affected being both legs and feet in two cases, the left arm in 1 case, and the right arm, right leg, and right side of the face in the remaining patient. In connexion with this subject Dr. James discusses the so-called "causeless hemiplegia" which may occur in tuberculous persons and he describes an instance which he considers to be of this kind. Dr. T. McHardy (Cullen) gives an account of a patient who had suffered from chronic gastric ulcer for twenty years, but found complete relief from all symptoms after taking $\frac{1}{16}$th or $\frac{1}{12}$th of a grain of bichromate of potassium every six hours for twenty-two days. Dr. W. Stewart McDougall describes a case of Ascites in which paracentesis was performed over 100 times. The patient is a female pauper in Sutherlandshire; in five years over 4000 pints of fluid have been removed from her abdomen.

Dublin Journal of Medical Science.—The original articles in the December number are by Dr. T. W. Grimshaw on the Relations between Preventive Medicine and Vital Statistics; by Dr. R. H. Kennan on "Relapse" in Scarlet Fever; and by Dr. J. W. Moore on Clinical Experiences of Septicæmia and Enteric Fever.

Manchester Royal Infirmary Students' Gazette.—An article in the November number entitled the English Student in Vienna and written by Mr. F. H. Westmacott contains a good deal of miscellaneous information which can hardly fail to be useful to English visitors arriving in the Austrian capital for the first time. It seems that hospital work there begins at 7.0, 7.30, or 8 A.M. and goes on till 7 P.M. The Pathological Institute is "open day and night."

DIARIES.

LETTS'S well-known diaries (Cassell and Co.), in their 1899 editions, are as comprehensive as usual, ably supplying the needs of the office, the home, and the individual, whilst the "Medical Diary" continues to provide members of the profession with a handy note-book, conveniently carried in the pocket, in which may be recorded the names of patients visited each day, lists of nurses with their residences, midwifery, vaccination, and Factory Act engagements, things wanted and lent, and accounts rendered, &c. There is also given much useful information which is sure to be needed at some time.

Wright's Improved Physicians', Surgeons', and Consultants' Visiting List (John Wright and Co., Bristol) is presented in three different forms. Forms A and C are the usual

annual editions, and form B, designed for perpetual use, is not restricted to any particular month or year. No doubt this latter feature has its advantages in not a few cases, and particularly so in very small or very extensive practices. The compiler of all three is Mr. Robert Simpson, L.R.C.P., L.R.C.S. Edin. The usual provision is made for recording in a convenient form the details of visits made and of engagements entered into, nurses' addresses, cash accounts, &c. Form C also supplies the needs of practitioners who are certifying surgeons under the Factory and Workshops Act.

Smith's Physicians' and Surgeons' Visiting List, Diary, &c., for 1899 (Hazell, Watson, and Viney, 52, Long-acre, W.C.) is the successor of fifty-two previous issues, and is therefore well advanced in the good opinions of the profession. Provision is made for jotting down the usual visits, engagements, &c., in a form convenient to the busy practitioner, and the varied information at the beginning of the diary adds materially to its value.

From Messrs. Bemrose, 23, Old Bailey, E.C., comes a *Monthly Diary* which provides twelve handy little note-books, one for each month in the year, suitable for carrying in the waistcoat pocket, and useful for jotting down those many little items which, when once thought of or come across, the busy man finds it absolutely necessary to "make a note of" if they are to be rescued from oblivion.—A similar idea is carried out in *My Month's Engagements, Diary, and Memoranda* (R. Bridges and Co., 92, Chancery-lane, W.C.), the twelve monthly parts being provided with a neat leather case, with pockets, which has the merit of being thin and therefore not cumbersome.

New Inventions.

A NEW FORM OF WARM DRY AIR INHALER.

THE indiscriminate use of steam inhalation in bronchitis and other respiratory affections I hold to be a mistake, and I am quite satisfied that better results can be had (in some cases, at least, of chronic or acute bronchitis) by the use of hot-air inhalation. The illustration represents a form of portable inhaler made at my suggestion by Messrs. Arnold and Sons, Smithfield, which so far as I can discover is the only inhaler of this kind that can be held in the hand of the patient. One mouthpiece acts as a funnel for filling the receptacle with boiling water, a constant temperature being maintained by a spirit-lamp underneath. There is another mouthpiece enclosing a piece of felt or spongiopiline, into which any medicament which may be selected can be dropped and the hot air drawn through, thus medicating the air inhaler.

The inhaler consists of a cylinder containing a spiral tube like the worm of a still; one end forms the core of the handle through which the outer air enters, the other end communicating with the mouthpiece.

Cheltenham. ALEXANDER DUKE, F.R.C.P. Irel.

PUBLIC VACCINATORS IN THE WEST OF ENGLAND.

THE "tremendous experiment" continues to give rise to a crop of arguments and discussions in many parts of the country. The matter came up before the Okehampton Board of guardians on Dec. 10th and it was stated that, taking last year as a basis when the fees paid for vaccination amounted to £31, the minimum offer made by the committee would be £81, but that on the scale demanded by the medical men the sum would be £118. One of the committee said that if every union adopted the terms which the medical men asked in that union the cost to the whole country would be half a million instead of as in last year £89,000. The committee understood that "all the vaccination medical men in the country held a conference and that the fees to be accepted were fixed at that conference." Eventually it was decided that the fees demanded could not be paid. The matter now rests with the Local Government Board.

At Camelford on Dec. 9th Mr. Jerome and Mr. Wade appeared before the board of guardians with regard to fees. The minimum was 5*s.*, but they asked 8*s.* 6*d.* Mr. J. Taylor of Trevalga proposed giving 6*s.* 6*d.* Mr. Venning of St. Cleather proposed to give the minimum and this was carried by 14 votes to 12. The medical officers refused to accept this and the matter was adjourned for a fortnight.

At Bodmin on Dec. 10th a long discussion took place without any definite decision being arrived at.

At Helston, on Dec. 10th, the vaccination committee recommended in connexion with the new Act that a fixed fee be paid in all cases, to include mileage; that the district for vaccinating purposes be rearranged; and that the vaccination officers be paid 3*d.* for every birth registered, 1*s.* for every registration of successful primary vaccination, and 9*d.* for transmitting a certificate to another district. The committee had also considered the replies from the several public vaccinators, all of whom, except Mr. Leverton-Spry of St. Keverne, asked for a registration fee of 2*s.* 6*d.* instead of 1*s.* offered by the board, but otherwise accepted the scale of fees offered. Mr. Leverton-Spry was now willing to accept 1*s.* registration fee. The committee decided to adhere to their original offer of 1*s.* It was proposed that if the medical men did not accept the 1*s.* registration fee to apply to the Local Government Board to elect one medical officer for the whole union. The present holders had been served with twenty-eight days' notice to terminate their present contracts so as to give the board of guardians a free hand. The resolutions were carried. We do not quite understand by what right the Helston Board of Guardians have given their public vaccinators twenty-eight days' notice so as to have a free hand, unless, indeed, there was some clause in the original contract bearing on such a notice. The Vaccination Memorandum of Oct. 18th, 1898, says (Art. I., par. 1.): "Provided that nothing in this article shall affect the validity of any contract for public vaccination made under any Order hereby rescinded."

At Barnstaple the vaccination committee having met the public vaccinators of the union recommended to the Barnstaple Board of Guardians the following scale of fees:—Art. 3 (*a*) 2*s.* 6*d.* instead of 1*s.*, as the committee considered the latter fee too small for the amount of work; and (*b*) 5*s.* for each successful case of vaccination and also a fee of 1*s.* per mile for each visit after the second mile, but in no case is the total fee to exceed 2 guineas except by a special order of the board. The guardians adopted this resolution.

DIPHTHERIA IN CARDIFF.—The medical officer of health of Cardiff (Dr. Walford) in his report to the Health Committee on Dec. 13th stated that for the four weeks ended Dec. 3rd 78 cases of diphtheria had been notified, compared with 32 in the preceding four weeks. Dr. Walford added that the whole of the surrounding districts of Glamorganshire were suffering from an increase in the number of cases of diphtheria.

THE LANCET.

LONDON: SATURDAY, DECEMBER 24, 1898.

RECENT proceedings regarding the Vaccination Acts by magistrates, boards of guardians, and anti-vaccinationists furnish much food for reflection. They indicate, indeed, that the year 1899 may witness a serious struggle between law and order on the one hand and the forces of anarchy on the other. The purpose of the conscience clause was to distinguish between genuine and deep-seated objection to vaccination and parental carelessness and neglect of duty. The clause was to make this distinction by imposing on those who chose to take advantage of it a considerable expenditure of time and trouble. That was the purpose of the clause, but unfortunately it was so drafted that such an interpretation is not at all obvious and in various parts of England magistrates are administering it in such a way as to afford no indication whatever of the reality and seriousness of alleged objection. This fact has become specially prominent with reference to the tens of thousands of children who have within the last fourteen years remained unvaccinated notwithstanding the requirements of the Acts of 1867 and 1871. Under the new Act a period of four months from the date of the coming into operation of the conscience clause was allowed to the parents of all such children either to get them vaccinated or to obtain relief certificates. The four months ended on Dec. 12th and within a week or two previous to that date various communities in which vaccination had been neglected seemed to waken up to the knowledge that the period of grace (if so reputable a word as *grace* can be used in such a connexion) was about to expire. The result was that various benches of magistrates arranged for special and repeated sittings, in some places for several hours night after night, and that at such sittings all attempt to ascertain the existence of conscientious objection was practically abandoned and the whole proceedings were reduced to a mere scramble for entrance into, and exit from, a crowded court-house, with the formality of obtaining in the course of crushing through the court-house a couple of hurried signatures to a printed document which had previously perhaps been purchased for a copper or two at the counter of some neighbouring bookseller. Such proceedings, of course, have not actually increased the amount of non-vaccination in such places. They have, indeed, provided in a rough and incomplete fashion a register of the unvaccinated juvenile population. It is, however, a matter of grave public concern that this line of action should have been followed, for it may have prevented the protection against small-pox of many thousands of children whose careless parents in the absence of so absurdly easy an alternative would have given their offspring the benefit of the Jennerian preventive rather than face prosecution and fine under the new Act. At Oldham, for instance, some time before Dec. 12th, the Mayor, who evidently sympathises with anti-vaccination, wrote to the local papers as follows: "Very few applications have hitherto been made, the reasons, in my opinion, being the inconvenient hour at which the courts sit (10 o'clock in the morning) and the charge which is made for the certificate. Conscientious anti-vaccinators regard this charge as a sort of penalty for their convictions. These two objections ought to be removed." And they were removed with a vengeance by the Mayor who with his colleagues sat night after night and hour after hour granting certificates to objectors whose conscientiousness (or the want of it) he had no possible time to consider. The result is said to be that some 30,000 certificates have been granted in Oldham, and but for the action of the Mayor many of the children so certified might have been submitted to vaccination by their parents. It is also a matter of concern as to whether in future with regard to children approaching the age of four months the same farcical interpretation of the Act will guide magistrates, or whether they will endeavour to carry out the spirit and purpose of the conscience clause by making it something else than a sham.

Certain other things, however, are being said and done with reference to the new Act which may turn out to be of even greater importance than these and which may raise questions going far beyond the scope of anything closely related to vaccination. Various boards of guardians influenced by various prominent anti-vaccinationists seem to have deliberately decided to defy Parliament and the nation with regard to this matter. Evidence of this was furnished at a Congress of the National Anti-Vaccination League recently held at Lincoln. Looking to the magisterial proceedings above referred to and to the fact that such proceedings could not have taken place if the Government had properly drafted its conscience clause so as to say definitely what was to be done under it, we can with difficulty dissent from the opinion expressed by one member of the League that "the conscience clause was a mockery and a sham" and that it makes "a bigger muddle of the Vaccination Acts than ever"; or by another, that the recent Act is "one of the most ridiculous known in the English law." That, however, is not the point of greatest interest in the deliberations of the League. Though as a body they did not venture to pass any resolution advising wholesale refusal of the conscience clause it was freely stated that certificates ought to be applied for only where anti-vaccinationists were in evil case but that where they were strong there should be no such compromise. Councillor BIGGS of Leicester is reported as having said that "the Leicester Board had simply acknowledged the receipt of the Local Government Board's communication and laid it on the table. They had defied the Local Government Board in the past and that would be their attitude in the future." As to the conscience clause anti-vaccinationists "ought to have nothing to do with it whatever." A Halifax representative declared that "he knew this—if a town was against a certain thing and the body representing the town was against it the Local Government Board would let them severely alone." In the Market-place at Leicester a public meeting was recently held at which it

was decided neither to submit to vaccination nor to apply for certificates of exemption. It is such proceedings as these that we look on as indicating the possibility, or even the probability, of an early struggle between the civil power and the forces of anarchy. The previous Vaccination Acts, though usually spoken of as compulsory, were not so in any real sense of the term. Even when faithfully administered by local boards all that the Acts did was to offer the two alternatives of payment of penalties and submission to vaccination, and when boards neglected their duty parents were left entirely free to do as they chose in the matter. This experience of license to set aside the law in the past is now bearing its fruits in the expressed determination of men like Mr. BIGGS and of the Leicester Board of Guardians to defy the law in the future. The national Legislature has gone a very long way in its anxiety to make it easy for anti-vaccinationists to obey the law of the country. Though Parliament and the Ministry and the Royal Commission on Vaccination agree with the medical profession in believing that vaccination is essential to the prevention of small-pox they yet, as a matter of expediency, determined to allow parents alleging them selves to be conscientious objectors to neglect the protection of their children against the scourge of small-pox. All that the country, as represented by Parliament, determined to ask was that every parent so objecting should take the time and trouble to make known his objection in a manner provided by the law. We have seen how in various parts of the country magistrates have gone much further than Parliament intended and much further than they ought to have gone in making it easy for parents to procure exemption from the operation of the Acts. Yet in the face of all this we find boards of guardians and responsible individuals deliberately deciding to disobey even the provisions of the new Act and to flout and defy the national will as expressed by Parliament. We find also that throughout the country, under the influence of the League or of its branches or of local agitators, probably thousands of parents of unvaccinated children under fourteen years of age have refrained alike from procuring their vaccination and from obtaining certificates under the conscience clause. The conciliatory offer has been ostentatiously rejected and the Government and Parliament are openly defied. The Local Government Board is told that past experience shows that, so far as it is concerned, it will yield to such defiance. In view of all this we have no hesitation in saying that great as is the importance of the prevention of small-pox epidemics in this country what is now at stake is infinitely greater. The question simply is whether the executive Government will cease to govern, whether Parliament will cease to care for the enforcement of its own enactments, and whether the national will as expressed by law shall be disobeyed with impunity. Never in the history of this country has more been done to make easy the obedience to the law. In the case of many foolish persons the effect has been to inflame their self-conceit, to increase their unreasoning obstinacy, and to confirm them in their opinion that the law can with safety be defied. That is the state of things with which the Government has now to grapple, and we repeat that the year 1899 is likely to see on this subject a constitutional struggle the results of which will have effects reaching far beyond the question of vaccination to which the struggle will have owed its origin.

WHEN the claims of public health come into conflict with those of fine art and history which of the two must be recognised as the stronger? Such is the question raised perennially in modern life when centres of population have to adjust or remodel themselves to the growing wants of the many—a question familiar to us in the British Isles but still more urgent in the lands washed by the Mediterranean, in which a remoter and fuller past is daily feeling the demands of a more exacting, because more imperfectly furnished, present. Our lay contemporaries have been giving prominence to the question chiefly as it affects Italy, whose political resurrection has brought and is bringing with it much disturbance, if not actual effacement, of monuments ancient and mediæval and whose centres of art treasure and historic association, like Florence and Rome, are being shaken to their deepest and innermost recesses by the architectural and sanitary rehabilitation imposed by the "new order." There is no doubt that by the building operations following on the necessary demolitions indicated much that is interesting, even precious, must disappear, but, on the other hand, much undeniable improvement and indispensable convenience is being effected; and so the question stands as we put it at the outset—which of the two exigencies, social and sanitary or artistic, is to have the preference? The old answer "salus populi suprema lex" seems the only possible one, even if it take the uncompromising version given to it by Italy's patriotic surgeon and author of her "Codice Sanitario," AGOSTINO BERTANI, who "per la salute di un solo individuo avrebbe distrutto il distruggibile" (would, for the health of one single individual have destroyed the destructible). But while insisting on the imperative claims of humanity to the normal conditions of life—fresh air, pure water, sound food, and commodious house-room—do we thereby ignore the interests of art with its creations or history with its monuments? Not so. It is possible to meet both demands, as, indeed, it is only by concurrently satisfying their respective claims that either interest can be enjoyed at its best. Art without health is even a worse condition than health without art. The world has never seen such a repertory of *chefs d'œuvres* in architecture, sculpture, and painting as Athens presented just before the Peloponnesian war. But the plague which early in that contest reduced the "City of the Violet Crown" to a lazaretto or charnel-house would have made PERICLES view the triumphs of PHIDIAS and ZEUXIS as so many eyesores could he have known that half the treasure which they cost would have obviated the overcrowding and the neglect of all sanitary law which incurred deadly Nemesis and brought himself, his family, and thousands of the fellow-citizens whom he loved to a premature and loathsome end.

This "lesson of history" was present to the mind of the Marchese TORRIGIANI, Mayor of Florence, when in the Chamber of Deputies the other day he thanked the company of British artists and men of letters

for their solicitude about the monuments of his city threatened as they were supposed to be by its necessary expansion and readjustment, but reminded them that humanity also had its claims and that to lead a healthy and normal life is man's first condition, without which art and literature are, at best, but "vain deluding joys." In further indication of his position he appealed to the Minister of Public Instruction, Dr. BACCELLI, himself a jealous conservator of historic and artistic treasure (witness his excavations in the Forum, on the Sacra Via, and on the Palatine), and drew from him an eloquent outburst on the claims of "la vita moderna" as not irreconcilable with those of history and fine art, followed by an expression of the fullest confidence in the Florentine committee appointed to safeguard the traditional attractions of the city. Moreover, as Dr. BACCELLI himself has put in evidence, the demolitions so dreaded by the foreign dilettanti have resulted in the unearthing of treasure-trove far more interesting and far more precious than the structures which they removed, till it has really come to be a question: Is it only mediæval monuments that are to be respected, and are there not records of a yet auguster past to be disclosed from beneath those pre-Renaissance edifices? The excavations of the "Centro" of Florence have resulted in a "true conquest for Etruscan art," and for that of the Roman epoch, as a visit to the Museo della Crocetta will demonstrate, and yet further relics are doubtless in store for the art student and the historian as the result of the demolitions so peremptorily "vetoed in advance." The late Dr. KING CHAMBERS, in his brilliant paper on the Climate of Italy (in great part reprinted from THE LANCET), described mediæval Florence as a series of "Hanway-passages bordered by Newgate prisons." He was no "Philistine"—on the contrary, he was a scholarly and artistically cultured physician; but his vote would certainly have supported the Marchese TORRIGIANI in his preference for light to gloom, for fresh air to foul, for the conditions of health to those of disease, all the more when he had the Marchese's assurance that artistic treasure and historic tradition would be duly respected, or, if subordinated to the *salus populi*, would in process of removal bring to light even yet more precious monuments, to the enrichment of the museums and to the increase of the attractions of the Tuscan "Modern Athens."

SOME amateurs are about to try a bold but very questionable experiment in Birmingham, one deeply affecting the interests of the medical profession and of the public. We say "some," but as far as our information goes at present we should speak only in the singular number. It is an experiment in a branch of medical practice which has hitherto been considered somewhat sacred. Mr. ARTHUR CHAMBERLAIN of Birmingham proposes to establish a consulting department in some central part of the city, to be served by young consultants and specialists who will be guaranteed a minimum salary—"a salary," according to the account of a representative of the *Birmingham Daily Post* who has had an interview with Mr. CHAMBERLAIN, "which would be worthy the acceptance even of the most skilled men among the rising members of the profession." The consulting department is to be for the benefit of, and is expected to be appreciated by, working men, foremen, school teachers, clerks, assistants in shops and persons of the lower middle class. There is to be no hard-and-fast line, we gather, for the exclusion of persons from the benefits of this new departure. "We want a place where a self-respecting, thoughtful, reasonable man or woman who is neither a pauper, an object of charity, nor a millionaire, can obtain the real truth about his or her particular illness and the treatment required for it for a reasonable sum in a reasonable time," &c. There is a wide gap here between the "object of charity" and the millionaire which may include half the patients now resorting to consultants at the minimum traditional fee of one guinea. The fee to be paid under the new *régime* is the modest sum of 10*s.* 6*d* per visit; we presume the fee is to be the same whether the patient comes to the "consulting department" or the consultant goes to the patient.

There is one expression in the above description of what Mr. ARTHUR CHAMBERLAIN wishes to achieve to which we take much exception. He says the object is that the self-respecting man, &c., may obtain the real truth about his illness, &c. Does Mr. CHAMBERLAIN really believe that medical practitioners are divided into two sets, one which gives "the real truth" and another giving a false account of facts? or that among the different grades of the profession there are different methods of detecting and treating and representing disease? We are sure he intends no disrespect to the body of the profession, but we think that he has been unfortunate here in his choice of words and that a little deeper acquaintance with the facts of practice will lead him to know that there is no essential difference in intelligence, in methods, or in candour between the general practitioner and his consulting brother and that they may fairly be trusted to work out the problem of consultation for needful cases between themselves. The fact that a layman should undertake to solve such a problem in a way inconsistent with all the notions of the profession is one to be observed. It suggests that, busy place as Birmingham is, there must still be much unoccupied energy there, but it does not prove anything more. And we cannot say that we are so much enamoured of the results of Birmingham experiments in medical practice and in the support of medical charities that we can afford to hail a brand-new experiment in a branch of practice which has hitherto, as we have said, been free from interference. We are of course glad that Mr. CHAMBERLAIN does not design to create another "great out-patient department where everybody will be seen in an hour and all have to herd together under discipline and pass the doctor at the rate of one a minute," and we note certain but very inadequate precautions against abuse. We cannot forget that in Birmingham very dangerous doctrines of claims to free medical attendance at hospitals have been based on the strength of contributions by workmen—contributions originally designed as charitable doles to institutions for the benefit of those labouring under exceptional ailments or accidents for the treatment of which neither the homes nor the means of working men were adequate.

Most sensible people will ask the question put to Mr.

ARTHUR CHAMBERLAIN by his interviewer in the *Birmingham Daily Post*, "Is there any need for such an institution?" and they will answer with a decided negative. If any young and able members of the profession walk into this trap they will do so on their own responsibility and they will lay themselves open to the charge of dealing another heavy blow at the dignity of medical practice in Birmingham. No one acquainted with the facts can maintain that there is any serious difficulty in procuring for the classes named consultation on reasonable terms. As a rule they can well afford to pay the modest guinea fee now regarded as the minimum fee of all self-respecting consultants. For Mr. CHAMBERLAIN must remember that self-respect is not the monopoly of humble patients, but a quality of men who by years of study and most exacting work attain to the grade of consultants and naturally expect their reward. We would urge him to reconsider this proposal and to leave the profession alone to make its own terms with classes whose providence and respectability make them unfit for such experiments as he contemplates. We are glad to see from the account in the *Birmingham Daily Post* that Dr. SAUNDBY and others make forcible objections to this project—a scheme which cannot fail still further to lower the estimate of medical science and the dignity of medical practice.

THE movement to establish a National Association for the Prevention of Consumption and Other Forms of Tuberculosis received a great impetus on Tuesday last, when His Royal Highness the PRINCE of WALES presided at a meeting held at Marlborough House to further the objects of the Association. In so graciously acceding to the desires of the organising committee His Royal Highness has again, as often before, evinced his sympathy with an effort to promote the cause of public health; and it is further significant of his wide interest in this sphere that no sooner was this meeting over than he proceeded to preside at the Council of the Hospital Fund which is linked with his name.

The gathering in support of the National Association for the Prevention of Tuberculosis was a notable one and the promoters of the "new crusade" are to be congratulated upon the inauguration of their work under such auspices as well as upon the moderation with which their aims were unfolded in the "statement" by Sir W. BROADBENT which opened the proceedings. No one can read this statement without being impressed by the need for such an organisation for the enlightenment of the people and the establishment of measures, simple in themselves but founded on scientific facts, calculated to diminish the ravages of tuberculous disease and to promote the recovery of those who are its victims. Indeed, we venture to think that the subject could hardly have been more effectively treated than it was in this statement which may be said to constitute the charter of the Association. For in the first place the extent of the plague which the Association is pledged to combat was clearly set forth in the striking statistics of mortality from tuberculosis in this country; and although it is admitted that from various reasons there has happily been a steady decline in that mortality during the past thirty years, yet the numbers of victims from what is now recognised as a preventable disease are still alarmingly large. Then came the declaration which barely a decade since would perhaps have been received with scepticism in many quarters that tuberculosis is invariably acquired by contagion. It is here that the public will especially need instruction. We should be loth to see in this country the adoption of some of the stringent measures to which Lord SALISBURY alluded as having been in vogue in Italy. The doctrine of the contagiousness of consumption has been held in that country almost since mediæval times and we fear that in consequence much unnecessary harshness has been shown towards, and many hardships inflicted upon, the unfortunate subjects of pulmonary phthisis. But, as Sir WILLIAM BROADBENT plainly averred, mere contact with, or the inhalation of the breath of, the sufferer does not suffice to transmit the contagion. The great risk lies in the lack of cleanliness, in the desiccation of the bacillus-laden sputa, in the absence of ventilation, and, as Sir SAMUEL WILKS wisely insisted, in the exclusion of that powerful bacillicidal agent, sunshine. What is needed is, then, *not* the segregation of the sick or their treatment as lepers, deprived of the care and companionship of those dearest to them, but the intelligent appreciation on the part of the patient and his kindred of the conditions under which the germs of the disease are cultivated and disseminated. Here the question of protection from the transmission of tubercle by the milk and flesh of diseased cattle comes in for debate. The value of the tuberculin test in the early recognition of the disease in cattle, and, as was pointed out by some speakers, the enlightenment of the farming and dairy industries with regard to the necessity of maintaining healthy stock open up fresh fields for the work of the Association. The hygienic principles which lie at the root of the question as regards man may well be kept in mind in the case of cattle, while many will share with Lord SALISBURY the satisfaction which he expressed that nothing in the shape of legislative enactments is to be sought by the Association. The definite pronouncement against the application of the Notification Act to tuberculosis is to be commended, for it was clearly shown that the preventive methods are of such a character as not to require the adoption of a measure which though of proved utility in the more acutely specific fevers might be fraught with many difficulties in such a disease as tuberculosis. The Association has as its main object the enlightenment of the public, and the agencies at its disposal for the dissemination of the comparatively simple and concise rules of conduct and cleanliness are many.

Lastly the novel but highly rational measure of treatment by means of open-air sanatoria will be encouraged by the Association; and in this connexion we may especially commend the munificent offer of the London partners of Messrs. WERNHER, BEIT, and Co. to set aside £20,000 to establish such a sanatorium in this country for a class of invalids who are unable to take advantage of the benefits of foreign sojourn which are only open to the rich. There is no doubt that this example will be followed and that we may expect as the benefit of the open-air treatment becomes appreciated the erection of such sanatoria

will be indispensable in lieu of hospitals and infirmaries where so many subjects of pulmonary phthisis are now retained. The experiences in Scotland related by Sir THOMAS GRAINGER STEWART and in Ireland by Dr. J. W. MOORE afford satisfactory proof of the practicability of treatment in such sanatoria even under this variable climate of ours. Many aspects of this question were touched upon at the Marlborough House meeting and it may not be out of place to recall that at the Epidemiological Society last week a paper was read by Dr. A. RANSOME upon this very subject in which he was sanguine enough to predict that in another thirty years but little would be left for us to do against tuberculosis as the disease would be then banished from the land just as leprosy has been. We would fain share this optimism, but we fear that such a consummation will not be attained in so brief a space. Nevertheless, we do believe that the task taken in hand by the newly-formed association which has received so gratifying a recognition from the highest quarters is one which, rightly conducted, may go a long way to secure this desirable end. The arousing of public interest in the question may further contribute to strengthen the hands of the sanitary reformer by insisting upon a diminution of the evils of overcrowding and over-building, the twin curses of modern civilisation.

Annotations.

"Ne quid nimis."

THE ALIEN CRIMINAL.

THE trial which ended last week by the conviction of a man named Schneider for murder once more presses on public attention the fact that London is inundated with foreigners of the poorest kind. This class swells our pauper population. A point, however, which has not been generally heeded is the amount of crime and the number of other offences attributable to people of alien blood. Whether we look at the names which appear at the county courts, the police courts, or the Old Bailey, it is impossible to avoid the conclusion that a disproportionate number of litigants and prisoners are aliens. This is not surprising when it is remembered how much of the scum of foreign countries is emptied on our willing land. From a medico-legal point of view the trial was interesting inasmuch as the plea of insanity was raised by counsel for the defence. The facts were admitted, therefore no other defence was available. The question of insanity in its relation to crime is perhaps the most difficult of all the subjects treated in our courts by medical men and lawyers. That Schneider was condemned to death was probably just. He was not judged by the jury to be of unsound mind when he committed the deed. At the same time, looking at the evidence, can it be said that it was proved that the accused was in full possession of the power of controlling his will at the time? The symptoms of insanity are so deeply hidden that it is often only by accident that they are seen. Therefore in questions of such difficulty it would be as well that the legal maxim should not be driven home too hard that a criminal is presumed to be sane until the contrary is proved—for that is the effect of it. The familiar legal test of insanity is whether the mind of the accused person is so diseased that he cannot know the nature and quality of the act he is committing or, if he knows it, that he does not recognise its wrongfulness. Probably if this test were applied to the acts of lunatics in our asylums the great majority of them would be liable at some time or other to punishment. Yet it is unlikely any one of them would ever suffer the death penalty for murder. As suggested above, a more satisfactory test would be the condition of the criminal's will-power, the power of self-control; and to settle so knotty a point either the judge should have assessors consisting of medical experts and specialists or the jury should consist of these to assist in arriving at a verdict. In the Admiralty Court the judge is assisted by assessors. Surely insanity is as important and difficult a subject as navigation.

MEDICAL AID AND THE LAW.

WE recorded in a note last week that the Court for the Consideration of Crown Cases Reserved had affirmed the conviction of a man named Senior, one of the Peculiar People, who was tried at the Old Bailey before Mr. Justice Wills in November for the manslaughter of one of his children. Seven out of twelve of them have died at different times without medical aid being obtained for them, and the sentence of four months' imprisonment which has now been passed by Mr. Justice Wills seems but a light one. It may, however, act in some measure as a deterrent to those who otherwise might join the sect and it may be increased in future cases. As has, we believe, been pointed out, the perfectly genuine religious beliefs which led to suttee in India or to human sacrifices in other countries now under our rule have not prevented our forbidding such customs and imposing heavy penalties on their observance. The case of Senior is interesting as illustrating the danger of brevity leading to obscurity when statutes are drawn. It is admitted to be doubtful whether there is at common law such an obligation upon a parent to call in medical aid for his child as will render him liable to be convicted of manslaughter should he neglect to do so and should the child die in consequence. An Act, however, was passed in 1868, dealing chiefly with poor relief, which incidentally made it an offence punishable on summary conviction "when any parent shall wilfully neglect to provide adequate food, clothing, *medical aid*, or lodging for his child, being in his custody, under the age of fourteen years, whereby the health of such child shall have been or shall be likely to be seriously injured." It was held in the case of one of the Peculiar People named Downes in 1875 that this Act imposed an absolute duty on parents, whatever their conscientious scruples might be, and that death having resulted from an intentional disobedience of the law the verdict of "Manslaughter" was right. In 1889, however, the Prevention of Cruelty to Children Act repealed the section of the Poor-law Amendment Act of 1868 above referred to and as a substitute made it an indictable offence for a person having the custody of a child to "wilfully assault, ill-treat, *neglect*, abandon, or expose" such child in a manner likely to cause unnecessary suffering or injury to the health of such child. The same expression to "wilfully neglect" is used in the Cruelty to Children Act of 1894 which has superseded that of 1889 and it was on the question suggested by the deliberate omission of all direct reference to medical aid that Mr. Justice Wills reserved the case of Senior for the consideration of his learned brethren. They held unanimously that neglect meant "the absence of such reasonable care as an ordinary parent would reasonably use for the care and protection of his child," in which, of course, the supplying of medical aid was included. That they should so hold and should confirm the conviction of Senior seems only natural; it must not, however, be thought that Mr. Justice Wills reserved the question unnecessarily. It seems that more or less

recently Mr. Justice Hawkins directed the jury to acquit one of the Peculiar People on the grounds indicated above. Apparently the consideration did not weigh with his lordship as it did with Lord Russell of Killowen, that it was unlikely that the Legislature intended to take a retrograde step in a matter of humanity. In addition to the light thrown on the evolution of laws by the case which we have commented upon it will be seen how different is the position of a child from that of a grown person where the summoning of medical aid by others is concerned—a difference marked recently by the withdrawal of the charge against the Christian Scientists in connexion with the death of Mr. Harold Frederic.

BICYCLING.

THERE can be hardly a doubt, we think, among those who have considered the subject at all, that bicycling, whether as an exercise or merely as an easy means of transit from one place to another, is likely to increase rather than to diminish among us. Its convenience is too obvious to admit of its falling into disuse, at least among a considerable class of the community. As an amusement no doubt it must, like other amusements, be more or less at the mercy of fashion and increase or diminish in popularity according to the whim of the moment. But as a mode of getting away from towns into the surrounding country, or of going from one part of the country to another, with all the excellent results to the health of the community which that implies, it is evidently destined to remain among us. Since this is so it is perhaps worth while to consider seriously a point with regard to this particular exercise which might be dismissed as relatively unimportant in the case of a mere pastime soon to be superseded by some new invention. Now that bicycling is becoming almost universal among the younger generation of both sexes in the middle and upper classes it is eminently desirable that everything that science can do should be done to make it a wholesome and rational recreation. Some steps have already been taken in this direction. Medical men have pointed out the dangers which lurk in this even more than in other physical exercises when indulged in to excess. They have indicated, both in individual cases and more generally, the ill-effects which even moderate cycle riding may have in the case of persons suffering, for example, from certain affections of the heart. And in addition to this we may confidently believe that individual practitioners have given the matter a certain amount of attention and in the case of individual patients or their children have spoken words of warning where warning was needed. For it is quite certain that while with some persons bicycling as an exercise has proved exceedingly beneficial to the general state of health there are other cases in which through some constitutional weakness either acquired or inherited it is not merely undesirable but even dangerous. Something, then, has already been accomplished by the medical profession in this matter, but something, we think, remains to be done. It is only necessary to watch the troops of riders who are to be met with on country roads or even in London itself to see that through carelessness or ignorance what may be both a graceful and a beneficial exercise is often turned into a harmful and pernicious one. There may be seen men and women mounted on machines which are so ill-adjusted to their requirements that they are quite unable to get the physical benefit from riding which should come from it. The handles are too low, the saddles are set too far back or too low or too high, and the result is that the riders have to adopt an ungainly and from the hygienic point of view undesirable attitude from which they may quite possibly feel serious consequences in the future. It is no uncommon thing, for instance, to see young girls mounted upon machines the saddles of which are placed far too high for them. Their parents naturally in many cases know little or nothing about bicycling. They know still less of the possible ill-effects which riding in a strained or unnatural position may produce, and the question arises how far their medical advisers are capable of helping them. A medical man will of course have no difficulty in pointing out that a bicycle which puts an undue strain upon certain muscles of a child or girl may produce serious consequences. But can he, if he is not an expert in cycling or has not especially studied cycle construction, point out what is wrong with any particular machine and how it should be adjusted to give the maximum of benefit to its rider with the minimum risk of physical injury? In most cases we imagine he could not, and it is not altogether reasonable to expect him to do so. What, then, are the parents or the riders themselves to do? They cannot in most cases trust the agents or dealers from whom they buy their machines. These men very often do not even know the possible dangers which lurk in a machine which does not fit its rider. Moreover, their business is to sell their machines, preferably the machines that chance to be in stock, and they can hardly be expected to point out to a purchaser that they have nothing on the premises that exactly fits him. To do so in nine cases out of ten would merely be to send the purchaser elsewhere for his machine. We confess we do not see any very clear road out of this difficulty. The only hope is that with the spread of bicycling, knowledge of the proper adjustment of a machine and the proper position of handles, saddle, pedals, and the rest relative to the rider and to each other will be so widely diffused that most riders will be able to see after these matters for themselves. There will then be not only fewer cases of actual injury from riding, but the positive good effects of a useful and pleasant form of exercise will be enhanced.

THE DANGERS OF ANÆSTHETICS IN CASES OF INTESTINAL OBSTRUCTION.

A FATALITY under an anæsthetic which occurred at the Sussex County Hospital illustrates the extreme difficulty and danger of giving anæsthetics to patients in whom, owing to intestinal obstruction, the contents of the bowels regurgitate into the stomach. The patient in this case was a man, aged thirty-eight years, whose abdomen was greatly distended as a result of three days' complete stoppage. The lungs were compressed and at the time of admission to the hospital his condition was described as moribund. Frequent vomiting had occurred during the day. The A.C.E. mixture was given from lint by the house surgeon and the head was kept lateralised. As soon as the patient was completely under the anæsthetic "brown fluid" came in a continuous stream from the mouth unaccompanied by retching. The operation proceeded as far as opening the peritoneum when the pulse and respiration failed almost simultaneously. 3 minims of liquor strychninæ and two hypodermic injections of brandy had been given before the anæsthetic. It is not stated whether any of the stercoraceous material had entered the lungs, but in the face of no mention being made of it it is presumable that such was not the case. As has been already pointed out in our columns death in these cases frequently results from the disease itself and the anæsthetic practically is an anodyne to the death struggle. It is the contraction of the diaphragm accompanying the general muscular contraction associated with dissolution which compresses the intestines, causing their contents to enter the stomach. The cardiac orifice, no longer in a condition of tonus, allows the steady flow of the gastric contents along the œsophagus into the buccal cavity. During the death struggle there is often a gasping inspiration which

is liable to aspirate the gastric contents from the mouth into the air-passages. In many cases of supposed suffocation by stercoraceous vomitus the entrance of the material into the trachea is not the cause but the consequence of the death struggle. On the other hand, in patients whose condition is less grave there is undoubtedly great danger of aspirating vomitus into the lungs and such a danger is increased in semi-anæsthesia. When the patient's condition allows of lavage by continuous syphon action that proceeding should be adopted; when the asthenia is too pronounced for it the choice of procedure lies between local anæsthesia for the incision in the skin with rapid puncture of the distended gut and general anæsthesia. The great risk of local anæsthesia in these cases is lest fear or shock should give the *coup de grâce*. Probably those who advise this or even the giving of no anæsthetic at all, whether general or local, forget the frequency of death under operation in the pre-anæsthetic period—deaths due solely to "shock." Valuable as are the methods of Schleich and Reclus there is no doubt that they have their limits and the spectre of sudden death haunts such procedures just as it claims a percentage, although happily but a small percentage, of victims when general anæsthetics are employed.

THE GENERAL MEDICAL COUNCIL AND UNQUALIFIED PRACTITIONERS.

ON Dec. 15th at Houghton-le-Spring Joseph Steel was charged with practising as a qualified medical man. Mr. Meynell prosecuted on behalf of the General Medical Council. Mr. Clark who defended said that the prosecution had failed to show that defendant had more than declared himself to be a botanist. In examination the defendant admitted that he had a medical club of 400 members paying from 6*d*. to 9*d*. a fortnight. Defendant was discharged. Mr. Joseph Steel will now be looked upon as a martyr and we make no doubt that his "practice" will increase. He probably knows perfectly well that his patients do not care two straws whether he is or is not qualified. To the ordinary miner a medical man is not one who has passed certain examinations and been put upon a roll known as the "Register": he is simply one who gives sick people a "bottle" when they ask for it. Probably it is dawning upon the north-countryman that there are two classes of medical men—namely, those who can sign certificates under the Workmen's Compensation Acts and those who cannot, but of any other difference the industrial population is to a large extent unaware.

THE "MEDIATE TREATMENT" OF A SYPHILITIC FŒTUS.

AN important lecture on this subject, delivered at the St. Louis Hospital by Professor Fournier, is published in the *Semaine Médicale* of Nov. 30th. Supposing the mother to be healthy but the father infected, is it possible to protect the fœtus? M. Fournier finds that it is—by the administration of mercury to the mother—which he calls the "mediate treatment" of the fœtus. This treatment produces no ill-effects on the mother. If during the first pregnancy of a healthy mother specific treatment is begun early a healthy child will usually be born at term. But the value of the treatment is better proved by cases where a number of abortions have occurred or where several syphilitic infants have been born. When this treatment is adopted a healthy child is born. For example, a young man contracted syphilis in 1881 and was treated for five months. He married in 1883. The first child died on the ninth day from "congenital feebleness." The second child was covered with syphilides and after the fifth week passed into a condition of marasmus and died. The mother underwent a course of specific treatment during the third pregnancy and was delivered at term of a healthy child which at the age of four years was still immune. M. Fournier said that many such cases could be cited. Moreover, under this treatment many complications of previous pregnancies—hydramnios, placental lesions, fœtal dystrophies, hydrocephalus—have been avoided. Treatment of the mother should be commenced as early as possible in the pregnancy and continued through the whole period. Mercury is the important agent but iodine may be advantageously combined with it. After trying a number of preparations M. Fournier has come to the conclusion that the protiodide of mercury in pills is the best. He recommends small doses. "As it is not an adult but a fœtus who is being treated a fœtal dose should be sufficient." But surely this is not convincing. The dose received by the fœtus is not the same as that administered to the mother. However, M. Fournier's observations that successful results may be obtained with daily doses of $\frac{1}{4}$ gr. and even $\frac{1}{8}$ gr. of the protiodide of mercury will receive due weight. There is an obvious source of fallacy—the curative effects of time alone. He adds that it is useless to give large doses to the mothers in cases where they are syphilitic. He recommends an intermittent treatment—twenty days of administration of the drug a month and ten days suspension "to allow the stomach to rest." But others, for example Professor Pinard, recommend continuous treatment.

FOREIGN BODIES IN THE NOSE.

THERE is perhaps no commonplace of medical practice which gives rise to more perplexity and misunderstanding than the diagnosis and treatment of foreign bodies in the noses of children. A short article on this subject in the *Journal de Clinique et de Thérapeutique Infantiles* of Dec. 1st by M. Felizet is therefore of some practical interest, His observations are founded on an experience of 31 cases. The bodies dislodged were of great variety, including dried peas and beans, cherry-stones, slate-pencil, pellets of paper and wool, &c. In all the cases the removal was effected by means of douching the free nasal meatus, either by the hydrostatic method or with a syringe, the injected fluid (tepid water) returning by the opposite nostril and driving the foreign body before it. The pressure of fluid employed in this proceeding is regulated by the resistance encountered or expected, but in all cases it is, at the outset, gentle and applied slowly in order to avoid interference with the action of the velum palati or sudden injection into the Eustachian tube and tympanum. In 26 of the cases noted this method alone sufficed; in 5 the impediment had to be further helped out of the nostril with a forceps or curette. This use of the douche is by no means new. It is noteworthy, nevertheless, both as an aid in the diagnosis and as by far the gentlest mode of treatment in this class of cases. The facts which we have quoted should go far to prove its general efficiency and to obviate at all events in the first instance those more direct instrumental measures commonly advised in surgical text-books.

THE PAY OF SURGEONS TO MINES AND MINING WORKS.

IN our issue of Nov. 12th we commented upon the pay and position of the surgeons attached to collieries throughout the Durham coalfield. The medical practitioners of the Eastern Valleys, Pontypool, Monmouthshire, have now issued a circular in which they point out that the basis on which amounts of payment to medical men are calculated has remained the same for the last twenty-five years, while the working expenses of a practice have practically doubled within the last few years. The necessity of bacteriological research, the increased cost of drugs, and especially of the materials requisite for antiseptic dressings and the like, have

all combined to bring about a rise in expenses, while the recent action of the General Medical Council in absolutely forbidding the employment of unqualified men has practically doubled the salaries of assistants. An assistant is of course a necessity, for no man however willing and able can possibly undertake the medical charge of a colliery or large works of any kind single-handed. The memorialists point out that the medical practitioners of the Western Valleys have been for some time paid upon a much higher basis than their medical brethren of the Eastern Valleys and the latter feel sure that such an inequality has only to be pointed out to be instantly remedied. They add that they are quite ready to discuss the matter with their employers, and not only ready but desirous of so doing. We are sure that if such a conference is held the workers of the Eastern Valleys will accede to the prayers of their medical men. This is no question of a club where prosperous tradesmen and town councillors fatten on the charity—for medical attendance at 3*s.* 6*d.* a year is charity—of men who work a great deal harder than they do themselves; it is a question of one set of toilers acting fairly by another set. Within the last twenty-five years or so the position of the average working man has improved wonderfully. Wages have risen, tea is cheaper, tobacco is cheaper, his children get their schooling at other people's expense, while free libraries, washhouses, and baths are found in most places. The collier and the ironworker are sensible men and will, we are sure, see the force of the arguments adduced by their medical men.

CEREBRO-SPINAL FEVER.

WE have received the abstract of a report on the recent appearance of cerebro-spinal fever (epidemic cerebro-spinal meningitis of Stillé) in Chicago in this year (1898) by Dr. W. J. Class. Notes are given of 38 cases, all uncertain and doubtful cases having been eliminated. A summary of the symptomatology of the cases is there given which will well repay perusal. Special attention is drawn to one symptom which the writer believes has not been dwelt upon to any extent in previous reports—namely, difficulty in swallowing. It was noticed in 6 cases, each of which ended fatally. It must therefore be considered as a grave omen in prognosis. As a rule it was found late in the disease when the patient had become semi-comatose, but in one instance it occurred several weeks before death while the patient was still perfectly conscious. Its causation is not clear but Dr. Class deems the opinion plausible that it is due to an accumulation of fluid in the fourth ventricle exerting pressure on the nerve centres in its immediate vicinity which control deglutition. From a consideration of our present knowledge of epidemic meningitis Dr. Class arrives at the following conclusions: (1) that epidemic cerebro-spinal meningitis is to be classed among the contagious diseases belonging to the same category as phthisis pulmonalis; (2) that insanitary conditions exert great influence in affording a proper nidus for the growth of the germs of this disease; (3) that health authorities should receive notice of the occurrence of a case of this disease in order that sanitary defects may be remedied; and (4) persons afflicted with this disease should whenever possible be isolated and all evacuations should be rendered innocuous by the use of antiseptics.

A DEATH FROM ANTHRAX AT BRADFORD.

AN inquest concluded on Dec. 14th at Bradford brought out very clearly the fact that though the Government may make regulations for dangerous trades it is by no means certain that they will be obeyed either by employers or by workmen. The inquest was held upon the body of a wool-sorter named Whalley employed by Messrs. Ickringill and Company. He had been employed in sorting Persian wool and, according to the medical evidence, died from anthrax poisoning, the point of infection being apparently a scratch on the arm. He had slept in the flannel shirt which he wore when at work. The most interesting part of the inquiry was, however, the evidence of the foreman. This official admitted that he knew of the existence of the "Special Rules" as to wool-sorting, No. 2 of which set forth that "all alpaca, Pelitan, Cashmere, Persian, and camel-hair shall be opened over a fan with a downward draught." His answer was: "Yes, I have seen that, but it was not done in this case." In answer to the deputy coroner witness made the remarkable admission that they did not insist on the regulations being carried out—"it was left at the option of the men." He was only a servant and had to follow the instructions of his master. He knew that all Persian wool was to be disinfected as far as possible before opening but that was not done in this case and no disinfectants were used until the deceased went off work. The jury returned a verdict of "Death from anthrax," adding a rider that they were of opinion that such anthrax was caused by non-observance of the regulations prescribed by law for the prevention of wool-sorters' disease. Mr. Wilson, solicitor for Messrs. Ickringill, asked, "By whom?" but the deputy coroner replied, "We don't say." We do not suppose the matter will be allowed to rest here, but in our opinion if employers wilfully neglect to enforce the rules laid down by the Government they should be severely punished, and workmen if they refuse to obey regulations should be at once dismissed.

THE AUSTRIAN PLAGUE COMMISSION.

IN January, 1897, the Austrian Government despatched a Medical Commission to Bombay to investigate and report upon the bubonic plague. That Commission succeeded in collecting a considerable amount of valuable scientific material by establishing itself in one of the most important epidemic hospitals of Bombay, so that before the arrival of the German and Russian Commissions it had already made marked progress in the study of the disease. On Nov. 24th, 1898, the Imperial Academy of Sciences in Vienna issued an exhaustive quarto volume composed of two parts, the first giving a broad general account of the scope and work of the Commission by Dr. Albrecht and the second, or purely scientific division, having a pathetic interest in the mournful fact that its gifted author, Dr. Hermann Müller, fell a victim to the dire disease in Vienna. The Commission commenced its labours on Feb. 24th, 1897, working assiduously until the decline of the epidemic in April deprived its members of "cases" for further study. From a general survey of the report of the Commission we infer that its chief aim was to study the disease from the standpoints of (*a*) etiology, (*b*) pathology, and (*c*) in its purely clinical aspect, the bacteriological and pathological investigations being chiefly conducted by Dr. Rudolf Pöch, Dr. Anton Ghow, and Dr. Heinrich Albrecht. Dr. Müller's clinical observations on the pulse, respiration, and temperature are of the highest practical value. The Commission no doubt encountered serious difficulties dependent largely on the unique system of religious caste in India, on the ignorant suspicion of the friends and relatives of sufferers, and in no small degree on the lack of that proper support which such a noble effort deserved. We are, however, pleased to note that the assistance of medical officers of health and local municipal authorities was willingly extended to the Commission, while the services of an English trained nurse conversant with the vernacular were highly appreciated in many clinical investigations. Dr. Müller very wisely confined his attention to carefully following the development and course of a few

individual cases as closely as he could under the circumstances in preference to a superficial examination and hasty judgment on all that passed before his eyes. There is a specially interesting chapter on the Diagnosis of Plague Pneumonia in the Initial Stage. Barisch, the attendant who had charge of the animals in the pathological laboratory of the Vienna Institute, contracted the disease and was at first thought to be suffering from "influenza," a fact which was soon clearly disproved by bacteriological examination, Dr. Müller remarking at the time "that it was a very difficult point to differentiate between an existent pneumonia and the characteristic plague pneumonia." Dr. Müller's conclusions led him to believe (*a*) that the development of the bubo was one of the earliest symptoms of the disease, preceding the profound disturbance of the nervous system; (*b*) that the disease originates in an "infection" through the skin remaining localised for a time; and (*c*) that the systemic or general infection develops from a local centre or focus of origin. He is of opinion that the disease can be divided into main varieties, one affecting the lymphatic glands and the other the lungs. We are struck by the thoroughness of the Commission's work as shown by the fact that clinical and anatomical investigations were always conducted *pari passu*. Separate sections of the report treat of the effects of the bacillus on the nervous system, on the organs of digestion, on the kidneys and bladder, and on the blood, while others touch upon the influence of age, race, sex, and occupation, the period of incubation, the manner of infection, of prophylaxis, and of the whole question of natural immunity. One important conclusion is drawn by Dr. Müller—that is, that because the infection has remained localised or has become constitutional it is impossible to accurately determine the future course and prognosis of the disease, a bacteriological examination being alone a decisive test. The volume closes with an appendix on the fatal illness of Dr. Müller written by his colleague Dr. Rudolf Pöck. In a future issue we hope to give a more extended notice of this report.

FIRES IN LUNATIC ASYLUMS.

FIRE in the wrong place is always more or less of a tragedy, but in a lunatic asylum the occurrence of a fire has special features which excite the concern of the public. An inquest was recently held on the body of Mr. William Cade, aged sixty years, who was suffocated on Dec. 15th at a private asylum, Beckenham-lane, Catford, the property of Dr. Charles Arthur Mercier, a gentleman of large experience and much authority in all questions of insanity and touching the organisation of asylums. After being assistant medical officer in various asylums Dr. Mercier became proprietor of the present establishment twelve years ago. The patient whose death was the subject of the inquest was aroused at the time of the occurrence of the fire, at 3 A.M., but it was considered that he was capable thereafter of attending to himself. At 3.51 A.M. station-officer S. Norris (called at 3.42 A.M.) in charge of the Catford fire station at Rushey-green (1½ miles and 100 yards from the asylum), arrived with engine and escape—the escape run by hand. The fire was extinguished in from 15 to 20 minutes. On the arrival of Mr. David Wall, the officer in charge of the fire station at Greenwich, just after 4 P.M., the patient was found to be missing and was searched for. With a handkerchief over his nose and mouth Mr. Wall crawled into several rooms and finally discovered Mr. Cade on the floor. Although overcome by the smoke Mr. Wall brought him out, but in spite of Dr. Mercier's efforts life was found to be extinct. On the alarm being given Dr. Mercier rang up the Telephone Exchange, but got an answer after some delay that they could not call the fire brigade but would continue to try. The telephone inspector at the Bromley Exchange essayed to call up the Volunteer Bromley Fire Brigade but could get no answer. Superintendent Dowell said that if the Bromley Exchange inspector had rung up the London Exchange they would have communicated with the headquarter staff at Southwark who would instantly have ordered on the Catford and Greenwich engines by telephone. The jury adopted this view and expressed it in the following rider: "That much valuable time might have been saved if the operator of the National Telephone Company at Bromley had been instructed to communicate direct to the London Fire Brigade." The obvious lesson of the event is to perfect the coördination of the telephone companies and the different local fire brigades and to make much clearer and simpler the instructions for getting immediate communication. There should also be on the premises of every asylum a means of dealing at once with fire and the officials should be drilled in the use of all appliances and means of rescue.

THE CASE OF BLACKMAIL.

MR. JUSTICE HAWKINS on Tuesday last sentenced the two elder brothers Chrimes, Richard and Edward, to twelve years' penal servitude and the younger brother, Leonard, to seven years' penal servitude for blackmail—the punishments being righteous retribution for vilely cruel and cowardly offences. The circumstances of the case form a terrible illustration of the evils which are done by such advertisements as we are now dealing with in a series of articles entitled "Quacks and Abortion: A Critical and Analytical Inquiry," and we note with pleasure that the jury in finding the prisoners guilty added the following rider to their verdict:—

"The jury feel that such a vile plot, even with all the ingenuity displayed in it, could only have been possible by the acceptance of such immoral advertisements by a section of the Press—religious and secular—well knowing their nature. The jury further express their earnest conviction that means should be found to suppress such advertisements and the institutions from which they emanate, as they consider them direct incentives to ignorant and evil-minded women to commit crime."

THE EDUCATION DEPARTMENT AND BILLROTH'S "CARE OF THE SICK."

WE have received from Mr. J. Bentall Endean, of Casatrio, Cockington, Devon, printed copies of letters which have passed between him and the Education Department, Whitehall, the correspondence extending from last June to November. Mr. Endean is the author of the English translation of Dr. Th. Billroth's "Care of the Sick at Home and in the Hospital." From a review of this book in the *School Board Chronicle* of May 21st he learned that "Ambulance" and "Sick Nursing" had become "special subjects" in the New Code for evening schools and, to quote his own words, he found "on comparing the syllabi of these subjects on pp. 12 and 13 of the New Code with 'The Care of the Sick' that these syllabi are based upon and are mainly drawn from J. Bentall Endean's English edition of 'The Care of the Sick,' for it is impossible to place the said syllabi side by side with the book without realising that the former are abstracted and constituted almost wholly from the latter." Mr. Endean thereupon asked Sir John Gorst, Vice-President of the Committee of Council on Education, "if compatible with the arrangements of your Department, if it would not be well that the teachers throughout the kingdom should be made aware that the principal text-book on these two 'special subjects' is 'The Care of the Sick,' by Dr. Th. Billroth"? The letters from the Education Department did not dispute the coincidences between the wording of the syllabus and that of Mr. Endean's translation, but stated that "it is the established practice of this Department not to recommend

the use of any particular books in public elementary schools." Mr. Endean complains bitterly that the course taken by the Education Department is in fact plagiarism and infringement of his copyright without acknowledgment, and his grievance appears to be a real one but it is difficult to suggest how it can be remedied.

JENNER INSTITUTE OF PREVENTIVE MEDICINE.

THE Jenner Memorial Committee having decided some time ago to transfer any funds which it might obtain to the British Institute of Preventive Medicine the council decided to alter the name "British Institute" to that of "Jenner Institute of Preventive Medicine" and in this way to commemorate permanently the memory of Jenner and his work. The legal formalities have now been completed and the institute will in future continue its work as the "Jenner Institute of Preventive Medicine." The syllabus for 1899 which has just been issued gives a full account of the departments which have been organised at Chelsea.

AN ACTION FOR MALPRAXIS.

A CASE was recently tried by Mr. Justice Darling in the Nisi Prius Court in which John Cole Baxter, aged sixteen years, through his father sued Dr. Adam Macvie, a medical practitioner of Baildon, for £500 as damage for alleged negligence. In the summer of 1896 the plaintiff's father took a house at Baildon Moor and on August 14th of that year the plaintiff while attempting to jump a stream fell and cut his knee on a broken glass bottle. Dr. Macvie was sent for and according to the plaintiff's case was shown some broken glass which had been found adhering to the boy's clothes. The defendant looked at the wound and without washing or probing it stitched it up On the third day there was a good deal of swelling and the defendant ordered poultices. Suppuration apparently occurred and the defendant removed two pieces of glass. On Aug. 26th Dr. T. C. Denby of Bradford examined the wound and the boy was removed to the Bradford Infirmary, where sundry incisions were made to let out matter. The boy remained in the infirmary until Nov. 25th. He had since suffered from a stiff joint. Various medical witnesses, such as Mr. Herbert White of Bradford, Mr. W. Whitehead of the Manchester Royal Infirmary, and others, gave evidence that in their opinion the wound was properly and prudently treated on the whole, although Mr. Whitehead said that he should not have put in stitches without a thorough examination and cleansing. Eventually the jury returned a verdict for the defendant. We congratulate Dr. Macvie upon the result of the action, but to our minds the most interesting feature in this case is the fact that a boy whose parents are presumably in a good position—the father is described as being a partner in the firm of Jabez Cole and Co., Bradford, and he apparently could afford to take a house for the summer—is allowed to lie for three months in a charitable institution. This fact, we consider, wants an explanation.

GENERALISED PNEUMOCOCCIC INFECTION IN PNEUMONIA.

AT the meeting of the Société des Hôpitaux of Paris held on Nov. 25th M. Duplocq and M. Lejonne related a case of pneumonia remarkable for the multiplicity of the complications. The patient was a robust man, aged fifty-nine years. The course was peculiar; there were consolidation in the left axillary region and generalised bronchitis in the right lung. On the ninth day a second focus of consolidation appeared at the left base and he expectorated for the first time two thick, viscid, greyish masses containing numerous pneumococci. On the thirteenth day a third focus manifested itself by fine crepitations at the right base and there was a well-marked swelling occupying the left subclavicular region and shoulder. Next day the œdema had disappeared but there were two communicating abscesses in the neighbourhood of the shoulder; the pus contained pneumococci. Arthrotomy was performed, a tumblerful of pus was evacuated, and the joint was drained. On the sixteenth day a fourth focus of consolidation showed itself by fine crepitations and there was tubular breathing in the left supra-scapular and subscapular regions. The patient improved and the discharge of pus from the shoulder diminished. But on the twentieth day a fifth focus appeared in the right supraspinous region, and on the twenty-second a sixth in the left axillary. On the twenty-third day the pulmonary lesions were resolving, but there was solid œdema occupying Scarpa's triangle on the right side and the right thigh and leg were very œdematous but soft. On the twenty-fifth day the œdema had diminished and the inguinal lymphatic glands were enlarged and painful. On the twenty-sixth day a seventh focus appeared at the left base and on the twenty-eighth day an eighth in the left subspinous region. On the thirty-second day the condition was grave; a line made on the skin with the nail was followed by a persistent red streak. A præ-laryngeal abscess containing pneumococci appeared. The inguinal glands were still enlarged. The blood contained pneumococci. In the evening a ninth focus was found at the left base. The respiration was difficult and the patient died on the following morning. The necropsy showed the left lung adherent to the thorax and extensively consolidated. The right lung was congested and œdematous. There was meningitis and the exudation contained pneumococci. The shoulder-joint was healed. Suppurative inflammation of the right psoas muscle was found. The presence of the pneumococcus in several of the lesions was verified by the fatal effects of injecting mice.

THE SANITARY STATE OF GERMAN EAST AFRICA.

FROM a report by Surgeon-Colonel Gartner of the German colonial army, which has been published in the *Archiv für Schiffs- und Tropen-Hygiene*, we learn that Bukoba on the Victoria Nyanza is the healthiest of the seventeen German stations in East Africa, whilst the least salubrious is Ulanga. As was to be expected, malaria was extremely prevalent during the period under report, the admissions to hospital due to this cause having amounted to 3360 per 1000 of strength among the white soldiers whose actual number was 122. In many of the cases the disease assumed a pernicious form and several of them proved fatal. Among the more numerous black troops, out of every 1000 admissions 887·9 were owing to ague, but the type was invariably mild. 21 cases of bilious hæmaturic fever occurred among the Europeans, 4 ending fatally. Quinine is said to have been the only drug which did any good in this disease. Arsenic was tried but its action was not satisfactory. As a palliative in the troublesome vomiting which usually accompanies the fever the tincture of iodine in from one- to four-drop doses sometimes acted like a charm. Dysentery and diarrhœa were comparatively innocuous; 23 Europeans and 174 natives were treated in the hospitals, chiefly for the last-named complaint. 14 white soldiers were admitted on account of acute rheumatism. This affection is common in Eastern Africa and often assumes a severe form with a tendency to cardiac complication and relapse. According to Surgeon-Colonel Gartner the sanitary condition of the colony, especially with regard to food, drinking-water, and habitations, leaves much to be desired, but some attempt has been made to dry up marshy places by planting palm trees. There are two chief hospitals in German East Africa, both of them being situated on the sea coast, at

Dar-es-Salaam and Lindi respectively. The report refers to the years 1894–95.

WORKING COLONY FOR INSANE EPILEPTICS.

THE Asylums Committee of the London County Council have decided on the formation of a working colony to accommodate 300 male insane epileptics. There are about 800 epileptic patients under treatment in the asylums under the control of the Council, and of these many are affected by a form of insanity which is remittent and during the intervals they are quite fit to undertake active employment. For such cases as these the colony will be a great boon. There are to be a medical officer and an assistant medical officer and an infirmary for the reception of patients during the periods when fits are severe or when mental alienation or excitement occurs. The colony is to be located on part of the estate of 1050 acres purchased for the erection of a new asylum at Horton, near Epsom, and the colonists are to be housed in detached buildings, each containing thirty-six inmates and three attendants. The arrangements have been planned on a liberal basis and appear to have been the result of wise consideration. We have no doubt that the colony will prove to be most helpful to the class which it is intended to receive, as the colonisation of sane epileptics has been at Chalfont and elsewhere. The work at the Chalfont colony appears to be seriously hampered for want of financial support, the committee not being able to provide the colony with a resident medical officer. It would seem to be an even wiser use of public money than that suggested by the London County Council if some were laid out on institutions similar to the one at Chalfont, where sane epileptics are taken with some hope that they may thus be saved from drifting into the class of insane epileptics.

FATAL SEWER-AIR POISONING.

ON Dec. 7th the Manchester City Coroner opened an inquest on the body of a corporation labourer who, together with a fellow workman whose body was not then but has since been recovered, was killed in one of the sewers by being "overcome by gas." The coroner said that the corporation had power to prevent anyone putting matter into the sewers which was likely to give off poisonous effluvia, that inquiries were being made as to the contents of this sewer in the City-road, and that a sample of the matter which was in the sewer where the men died was being analysed. Evidence of identification was taken and of the facts observed at the time. The foreman of the men said that he followed the two men into the sewer. There was a strong smell of gas which felt hot to the nostrils. It was stronger than coal gas and unlike it. In April last he smelt something like it in the same sewer but had not noticed it elsewhere. The two men went along the sewer, lighting their candles which burned brightly as they went. Witness called them back, saying, "It's too strong," and they answered, "All right, we're coming." He got out of the manhole and went to the next one to warn the man there. It was only after a long and dangerous search that the first body was recovered and on Dec. 7th the body of the second victim was found on the grid at the outfall of the sewage works at Davyhulme. The inquest was adjourned. These accidents being preventable ought not to occur and therefore seem the more deplorable. No doubt they will receive as they deserve the most serious attention of the corporation. Regulations might surely be made, and carried out, which would put a stop to them. The statement by the foreman implies that the smell was not familiar to him, so that it is probable the poisonous gas was derived from an unusual source, some industrial refuse or chemical residues.

ONE action of Lord Vernon whose death at the early age of forty-four years is announced from Bournemouth, has a particular interest not only for medical men but for all the country at the present moment. Lord Vernon spared no expense in his attempt to free the cattle on his farms from tuberculosis and last summer he invited a representative group of medical and scientific men to inspect the system of precautions which he had adopted at Sudbury Hall. The address delivered on that occasion to the assembled company by Professor Delépine will be found published in full in THE LANCET of Sept. 17th, 1898.

DR. H. D. ROLLESTON has been appointed physician to St. George's Hospital. Dr. Arthur Latham has been appointed assistant physician to the hospital in his place. Dr. Latham is assistant physician to the Victoria Hospital for Children, has held the offices of curator of the museum and medical registrar at St. George's Hospital, and was lately Radcliffe Travelling Fellow in the University of Oxford.

BARON FERDINAND DE ROTHSCHILD, the founder and supporter of the Evelina Hospital for Children, Southwark Bridge-road, built in memory of his wife, died suddenly on Saturday last at Waddesdon Manor. Like other members of his family the deceased Baron was a warm supporter of charities and especially of those which minister to the needs of the sick poor.

WE regret to announce the death of Dr. William Munk, Harveian Librarian of the Royal College of Physicians of London, from diabetes, at the advanced age of eighty-two years, on Tuesday last, Dec. 20.—Professor Alfredo Antunes Kanthack, Professor of Pathology in the University of Cambridge, died on Wednesday at the early age of thirty-five years. We shall publish obituary notices later of both gentlemen.

DR. ALFRED MILNE GOSSAGE has been elected Assistant Physician to the East London Hospital for Children and Dispensary for Women at Shadwell.

MR. CHAMBERLAIN has promised to preside at the dinner of the London School of Tropical Medicine to be held at the Hotel Cecil on May 10th, 1899.

BRISTOL HOSPITAL SUNDAY FUND.—The Mayor of Bristol, Mr. Herbert Ashman, presided at a meeting on Dec. 13th at the Guildhall in furtherance of this object. In moving the adoption of the report he stated that the sum received last year was only £1128 3*s.* 5*d.*, this being no doubt partly due to its being the first collection made by the Hospital Sunday Committee in places of worship, while only half the congregations joined in the combined effort. He hoped that in future the collection would be larger and more thoroughly taken up. The Rev. Urijah Thomas seconded the adoption of the report and it was carried. The Bishop of Bristol moved a resolution constituting the committee and spoke strongly in favour of the movement, personally undertaking to write to all clergymen of the Church of England who did not take part in last year's collection. Mr. F. R. Cross seconded the resolution and showed how uncertain the amount received from church and chapel collections had been in former years. The committee was then formed, the mayor being chairman, Mr. E. J. Swann honorary treasurer, and Dr. Bertram Rogers honorary secretary, with 23 other members, amongst whom were the High Sheriff, the Lord Bishop of Bristol, the Bishop of Clifton, the Dean of Bristol, Canon Cornish, the Rev. U. Thomas, the Rev. A. Thomas, the Rev. Dr. Glover, the Rev. A. Blatchford, Mr. F. J. Fry, and Mr. S. D. Wills.

QUACKS AND ABORTION:
A CRITICAL AND ANALYTICAL INQUIRY.

III.[1]

As the great majority of the people whose advertisements we have answered state or imply in their multicoloured pamphlets and circulars that amenorrhœa is a condition common to womanhood and that it is this condition of amenorrhœa so dangerous and so far-reaching in its evil effects that their different nostrums have been prepared to combat, it will be well, before going farther, to give the results of an inquiry into the causes which led 1000 women consecutively to present themselves at the out-patient department for obstetric cases of one of the large London hospitals.

Of 1000 cases seen at this out-patient department 183 patients had amenorrhœa. Of these 156 were pregnant and 12 were young girls at puberty in whom the condition of pregnancy was out of the question, so that of the 171 who might have been pregnant 156, or 96·5 per cent., were so. Of the remaining 15 cases 1 patient, aged twenty-seven years, single, had primary amenorrhœa; 7 patients (4 married and 3 single) had definite anæmia; 1 patient, single, had had pelvic peritonitis two years before and had seen nothing since; 1 patient, married, ? had approaching menopause; 1 patient, married, had fits and had seen nothing for seven years; and 1 patient, married, had seen nothing since before marriage some years ago. This leaves 3 patients, 2 who were married and 1 who was single, in whom there was no definite cause for the amenorrhœa.

It comes to this then. Of 183 cases 156 patients were pregnant, which accounts for their state of amenorrhœa. In 24 cases there was some definite condition in the age or history of the patient to render it unlikely that she was pregnant and in all these 24 cases such turned out to be the fact, while the amenorrhœa was dependent upon some easily ascertainable cause. It was no disease, but only the symptom of a physiological or pathological state; in some cases no medicine could have affected it and in none would the administration of emmenagogues have been right. In 3 cases only was there no definite cause present to explain the amenorrhœa.

It may be concluded: (1) amenorrhœa or irregularity of periods is common about puberty and at approaching menopause; (2) in otherwise healthy married or single women amenorrhœa in the great majority of cases is undoubtedly due to pregnancy; (3) where this is not the case with very few exceptions, only 3 out of the 183 cases of amenorrhœa met with in these 1000 cases, the condition of the patient or the circumstances under which the periods fail to appear are such as to render unlikely the possibility of pregnancy being the cause. At the hospital it would seem that the sufferer from amenorrhœa is either pregnant and knows it or is not pregnant and knows that she cannot be.

The fact that cases of amenorrhœa in healthy women where there is any doubt about the presence of pregnancy are so rarely seen in hospital practice indicates that such women do not seek hospital advice. The reason for this is probably twofold: (1) they guess that they are pregnant and know that a visit to the hospital will entail an examination which in the case of an unmarried woman might result in awkward revelations; and (2) they know that if the examination proves nothing yet that a missed period will be taken as an extremely likely symptom of pregnancy, while no such treatment as they often desire—viz., medicine to bring on the periods again—will be accorded them.

Seeing that the majority of instances in which healthy married women miss a period are cases of commencing pregnancy it is obvious that such a condition cannot be and is not as a rule productive of the ills ascribed to it by the vendors of quack nostrums; while, equally as a rule, to attempt to bring on menstruation in such cases is to attempt a criminal abortion.

The occurrence of amenorrhœa in cases of anæmia or other debilitating diseases such as phthisis is beneficial to the patient by avoiding any loss of blood and is a provision of nature to assist in arresting the progress of the diseases causing the condition. In these cases amenorrhœa, far from being an ill, is in fact an advantage to the patient.

We continue now an analysis of various pills and potions received in the course of this inquiry, with extracts of correspondence that has taken place with the vendors.

C.

We select two examples from a large number of recent advertisements bearing the same address which are now before us:—

Important to Ladies.—Especially to those who require an ABSOLUTELY CERTAIN and speedy remedy; a remedy which in thousands of cases has never failed to afford COMPLETE RELIEF, generally in a few hours, as Mrs. W. writes:—

"By adopting your treatment, my anxiety and misery was over WITHIN TWENTY-FOUR HOURS, although for three months I had been daily taking pills and other things in vain. HALF THE QUANTITY YOU SENT ME PROVED EFFECTIVE."

Full particulars will be forwarded to any lady on receipt of addressed envelope. The medicine is not expensive, as one bottle at 4s. 6d. is generally amply sufficient. By post 4s. 9d. A SWORN GUARANTEE accompanies all Testimonials. WRITE AT ONCE TO Mrs. B. B. F. ALLEN, 145, STOCKWELL-ROAD, LONDON, S.W.

To Ladies.—Especially to those who require a Safe and Speedy Remedy for all Irregularities, a Remedy which in thousands of cases has afforded COMPLETE RELIEF, generally in a few hours. No lady need despair, as the most obstinate and hopeless cases have been immediately relieved.

Mrs. J. states:—"I write to let you know I consider your medicine is fully worth £20 a bottle. I ONLY TOOK THREE DOSES before all was well. It has given me every satisfaction, particularly so because for over three months I had daily taken pills and other so-called remedies in vain."

The medicine is not expensive, as one bottle at 4s. 6d. is generally sufficient. By post 4s. 9d.

IMPORTANT WARNING.—This marvellous preparation HAS THE LARGEST SALE OF ANY FEMALE MEDICINE IN THE WORLD, a success achieved by MERIT ALONE. It is pleasant to take, perfectly harmless, but CERTAIN IN ITS ACTION, and readers are CAUTIONED against worthless and injurious imitations. Conclusive proof gladly forwarded to any lady on receipt of addressed envelope gratis and post free. It will cost you nothing, and SUCCESS BEING GUARANTEED, it may save you from a life of misery and bitter disappointment.

A SWORN GUARANTEE accompanies all testimonials and medicine. Write at once to Mrs. M., 145, Stockwell-road, London, S.W.

This is the firm which drew attention to itself last spring by an action which it brought against a newspaper called *Pick-me-up*, a report of which will be found in the *Times* of March 10th, 1898, under the title of Owen *v.* Greenberg. The newspaper had changed hands and the new proprietors found themselves saddled with a contract to insert Owen's advertisements, a series of which had been paid for in advance. This they declined to do and the nostrum vendor sought to recover the money he had paid in respect of the time during which his advertisements should have appeared and also damages for their non-insertion. The defendants paid money into court, denying liability and pleading that the advertisements were of an illegal and immoral nature. Mr. Justice Darling put the question so raised to the jury thus: "It was said that the advertisements were of an illegal and immoral nature and if the contract to insert them was of that nature the money the plaintiff had paid could not be recovered back. The question was, Was it intended by the advertisements to convey that the medicine would procure miscarriage or abortion? To procure abortion or to attempt, or counsel, or assist to procure it was a criminal offence and therefore you would expect any advertisement relating to it to be in very guarded terms. If the advertisement advised the taking of something for the purpose of procuring abortion it was undoubtedly forbidden by law." The jury found upon this question that the contracts for the insertion of the advertisements were immoral and judgment was given for the defendants.

In the evidence reported as having been given at the trial we note two or three points. Firstly, it was stated that the advertisements of the plaintiff were scattered broadcast through the press and appeared in any number of respectable papers: we regret to add to this that they have continued to appear in some papers ever since and that in spite of the jury's verdict in Owen *v.* Greenberg they were more numerous at the time when we commenced this inquiry than those of any rival firm. Various names and initials are used by the vendor but the address

[1] Articles I. and II. were published in THE LANCET of Dec. 10th and 7th, 1898, respectively.

in Stockwell-road as well as the wording of the advertisements establishes the identity. Secondly, Dr. D. H. Attfield, called on behalf of the defendants, informed the jury that he had analysed the compound sold by the plaintiff at 4*s*. 6*d*., the alleged stronger mixture at 10*s*. 6*d*., and the alleged strongest of all at 21*s*., and that there was no difference between them on analysis. We may assume that Dr. Attfield's observation was perfectly accurate, for it remained unchallenged. We have ourselves analysed the stuff sold at 4*s*. 6*d*. and we append the analysis. Thirdly, we are unable to extract from the report of Owen *v*. Greenberg the plaintiff's testimony as to his trade, for he did not go into the witness-box in support of his case.

Our letter to the Irristum Company, for that seems to be the name principally used by Mr. Owen, or Allen when once his customers get into communication with him, enclosed 4*s*. 9*d*. for a bottle of mixture and postage, requesting that it might be packed so as to be safe from observation, the sender being represented as a maid-servant. In reply we received a bottle of the Irristum medicine, a large bundle of printed matter, chiefly consisting of testimonials of the usual description, and also a lengthy dissertation on the merits of Irristum containing the following passage: "*Irristum gives rise to no nausea*, its beneficial effects are *almost at once apparent* and the lady who has the confidence to employ it as an agent finds that her domestic associations and the pleasures of social life are not interfered with but distinctly enhanced."

We have referred already to the probability of women buying compounds advertised in such terms as those of the Irristum Company without further question for the purpose of procuring abortion. In our dealings with the Irristum Company they denied treating pregnancy when pressed upon the subject and recommended the writer who asked in terms for an abortifacient to "consult a medical man," which seemed to us a fairly impudent suggestion. But surely any question of "Mrs. W.'s" grateful testimonial (see the first of the two advertisements printed above) or of the similar testimonials quoted by the Irristum Company having reference to amenorrhœa and dysmenorrhœa apart from pregnancy is practically disposed of by the figures we have given as to the frequency of these conditions. The inevitable dilemma is that either Irristum medicines, in spite of the virtuous intent of their proprietor, are swallowed by pregnant women or that the testimonials are bogus.

Analysis of ALLEN'S MIXTURE (KNOWN AS "IRRISTUM").

Specific gravity, 1066.
Water, 82·67 per cent.
Chloroform, 1·66 per cent.
Organic substances, 14·94 per cent.
Mineral matters, 0·73 per cent.

As will be seen, this preparation contains an odd constituent in the shape of chloroform. The relatively high density of the fluid was due to sugar. The colouring matter was cochineal, the fluid turning a brilliant cochineal colour when ammonia was added. The liquid exhibited a marked acid reaction and was acrid to the taste. Chloroform extracted an extremely bitter yellow substance which with chemical reagents behaved exactly like extract of colocynth. The mineral matter, which is small in amount, contained an unimportant quantity of iron. A search for arsenic and mercury was followed by negative results.

D.

The advertisement in this case was as follows:—

EVERY WOMAN

Should send two stamps for our 32 page Illustrated Book, containing valuable information how all Irregularities and Obstructions may be entirely avoided or removed by simple means. Recommended by eminent Physicians as the only Safe, Sure, and Genuine Remedy. Never Fails. Thousands of Testimonials. Mr. P. BLANCHARD, Forest-road, Dalston, London.—Advt.

We wrote asking for the work advertised and received a bundle of pamphlets and leaflets, two being in book form. Of these two one was filled chiefly with testimonials lauding the medicines which we afterwards ordered; the other was an elaborately illustrated catalogue of rubber preventives and similar appliances. The book of testimonials was illustrated also with pictures of husbands and wives delighted with the results of Mr. Blanchard's remedies and the testimonials themselves were of the usual kind; one, for instance, ran as follows:—

DEAR SIR,—I had the greatest trouble in persuading my wife to try your remedy, because she had tried so many without avail when at last I induced her to *and the fourth dose* proved effective; you can imagine her joy and surprise. 7*s*. 6*d*. is cheap; it is worth 20 times that amount. —— DURHAM.

The medicine advertised consisted of "No. 1 Mixture and Pills" and "Special Mixture and Pills," termed also "P.B. Mixture and Pills," the latter stated in large capitals to "Act Like Magic." On an order form sent among other papers we find the following notice or intimation:—

The powerful and certain action of our Medicine necessitates the Warning that it should not be taken by those expecting to become Mothers, as it is sure to produce a miscarriage.
This Order is accepted on the basis that the purchaser is not *enceinte*.

We can only say with regard to this that without using any order form we wrote a letter asking for "a bottle of Mixture and Extra Strong Pills," these being the words of one of the circulars, enclosing at the same time 7*s*. 6*d*. This letter distinctly stated that the writer believed herself to be pregnant and the mixture and pills of which we now give the analysis were sent in response.

Analysis of MR. P. BLANCHARD'S MIXTURE.

The analysis of this fluid was as follows:—
Water, 98·13 per cent.
Organic matters, 1·25 per cent.
Mineral matter, 0·62 per cent.
The mineral matter consisted almost exclusively of iron.
The fluid on evaporation evolved a very marked smell of nutmegs. No satisfactory results were obtained on applying the tests for aloes and rhubarb. The specific gravity of the fluid was 1011, a result which is in accordance with the small amount of dissolved substances present. The analysis in brief indicates that the mixture is simply a feeble solution of nutmegs and iron. Arsenic or mercury could not be found.

Analysis of MR. P. BLANCHARD'S PILLS.

These pills were pink coated, the coating consisting of a talc-like substance.
Moisture, 13·00 per cent.
Organic substances, 48·28 per cent.
Mineral matter, 38·72 per cent.
The mineral matter was nearly pure oxide of iron.
Alcohol extracted a dark resinous compound possessing a bitter taste and yielding reactions characteristic of commercial Socotra aloes. The pills contained no arsenic or mercury.

E.

We took this advertisement as an example in our first article:—

Ladies, Consult Madame Wood, LADY SPECIALIST ON ALL FEMALE AILMENTS, IRREGULARITIES, AND OBSTRUCTIONS, however obstinate. Save Time, Trouble, and Expense by consulting an Experienced Specialist AT ONCE. My Remedies are the most powerful and strongest on earth, effectual after all others have failed. May be taken by the most delicate. A lady writes: "NONE HAVE EVER DONE ME ANY GOOD BUT YOURS, NOTWITHSTANDING THEIR SO-CALLED TESTIMONIALS." Madame Wood may be consulted daily, or by letter, enclosing stamped envelope. Price of Mixture 4*s*. 6*d*., extra strong 11*s*., secretly packed. By post 3*d*. extra. 20, GREAT AVENHAM-STREET, PRESTON, LANCASHIRE.

Our letter ordered a bottle of the extra strong mixture, enclosed 11*s*. 3*d*., described the sender as a servant in a situation, and asked for the bottle to be secretly packed as advertised. We received a bottle from Preston and we note that the desire for secrecy extended to the sender, for the letter which accompanied it bore neither date nor signature, while the bottle also had nothing on it that would in any way identify the person responsible for its contents. It was labelled, "The mixture, a teaspoonful three times a day." The letter was as follows:—

DEAR MADAM,—Yours to hand enclosed find Mixture, take before meals. I shall be pleased to hear if the mixture effects a cure, *if not* you better send full particulars & I shall be pleased to advise you further, in most cases it is just a matter of a little perseverance, some people require more medicine than others, when you write again mention what paper you have seen it in.

A subsequent letter stating, in reply to the request for particulars, that the sender had been *enceinte* for four months was not replied to by Madame Wood and we did not press the matter. We append the analysis of her 11*s*. medicine. It bore no Revenue stamp.

Analysis of MADAME WOOD'S MIXTURE.

Specific gravity, 1015.
Water, 98·83 per cent.
Organic substances, 0·69 per cent.
Mineral matters, 0·48 per cent.

This preparation did not appear to contain any iron, the mineral matter consisting of alkaline carbonate. The original fluid was distinctly alkaline and in appearance precisely like a boiled alkaline solution of rhubarb.

Subsequent extraction with ether gave a brilliant yellow residue responding satisfactorily to the reactions of rhubarb. Our examination indicates, therefore, that this mixture is a weak alkaline infusion of rhubarb. On testing for aloes the results gave no certain positive indications. There were no poisonous metals present.

F.

This person does not require much comment; the advertisement was a follows:—

Dean's Female Mixture. Is positively the only reliable, and strongest on earth. It will not harm the most delicate. It will cure the most obstinate cases within twelve hours. Success guaranteed in every case however long standing. THOUSANDS OF GENUINE TESTIMONIALS. Price 2s. 9d., post free 3d. extra. To be had only of C. DEAN, MEDICAL HERBALIST, 113, GRAY'S INN-ROAD, LONDON, W.C.

It will be noted that there is no phrase that can be construed as a reference to menstrual troubles excluding those arising from pregnancy. In fact there is no direct reference to anything at all. It is "a female mixture": "the strongest on earth": "success guaranteed in every case." The nature of the case and of the success guaranteed is left entirely to the reader to determine. Our letter to C. Dean asked for a bottle of the mixture at 2s. 9d. and was practically the same as that sent to Madame Wood and others. We received a bottle in reply with the following printed letter:—

C. Dean, 113, Gray's-inn-road,
Medical Herbalist, Holborn, W.C.

MADAM,—Enclosed you find the Female Mixture. Take the contents of the bottle in two doses: one half at night, and the other half on the next morning. If no relief you will have to take six doses of a Stronger Mixture, of which the price is Five Shillings and Sixpence.

Relief is certain. Do not lose time.

Yours truly, C. DEAN.

We did not try the stronger mixture. The analysis of that at 2s. 9d. is as follows:—

Analysis of MR. C. DEAN'S MIXTURE.

Specific gravity, 1050.
Water, 94·13 per cent.
Organic substances, 0·35 per cent.
Mineral matter, 5·52 per cent.

The mineral matters consisted entirely of sulphate of soda and of iron and we infer that the mixture consists in the main of a solution of Glauber's salt and iron. Poisonous metals could not be traced.

G.

The advertisement in this case was as follows:—

FREE! — MARRIED LADIES! — INFORMATION and ADVICE of PRICELESS VALUE. Send stamped envelope. Mention this paper.—Mrs. LAWRENCE, 2, South John-street, Liverpool.

In reply to our stamped envelope we received various advertisements and eventually wrote again enclosing money with a definite statement that the sender believed herself *enceinte* and asked for a "bottle of Special Strong Mixture at 12s. 6d. and a box of Special Corrective Pills at 2s. 9d.," for which were enclosed a postal order for 15s. and 3 stamps. The goods arrived accompanied by a memorandum or invoice which we reproduce, while we append the results of our analysis below:—

From Mrs. LAWRENCE, the Ladies' Specialist and Confidante, Inventress of Domestic and Surgical Specialities, Malthusian Appliances, &c., 2, South John Street, Liverpool, and 3, St. Elmo Rd., Egremont, Liverpool.

DEAR MADAM,—Thanking you very much for your kind order, Mrs. Lawrence now has pleasure in handing you, herewith, her WORLD FAMOUS OBSTRUCTION REMEDY, to the value of your remittance, and she trusts that it will Prove Successful as speedily in your case as it has Done Generally. Assuring you that in no event will your name be published without your permission. Mrs. L—— hopes that you will be good enough to let her know the result, at your earliest convenience, and would strongly advise you to have plenty of out-door exercise, (keeping yourself free from colds), and a Hot Foot-Bath at night, whilst taking her remedy.

Analysis of MRS. LAWRENCE'S MIXTURE.

Water and oil of peppermint, 93·59 per cent.[2]
Organic substances, 4·60 per cent.
Mineral matter, 1·81 per cent.

[2] Equals loss on evaporation.

The mineral matter consisted chiefly of iron, sulphate of soda, and some alkaline carbonate.

The specific gravity was 1030.

This proved to be a very complex mixture. It was a treacly, dirty brown fluid with a strong taste of peppermint. On distilling away the peppermint oil the residual fluid possessed a bitter taste and at the same time a flavour strongly suggestive of liquorice. Alcohol extracted a substance tasting exactly like liquorice. Ether dissolved a yellowish green substance closely resembling apiol as regards appearance and smell. The odour of myrrh in this residue was unmistakable. Feeble reactions were obtained corresponding with those yielded by Socotra aloes. The preparation is compounded of apparently a hybrid of the mistura ferri co. and the decoctum aloes co. of the Pharmacopœia. There was no evidence of mercury or arsenic.

We shall next week continue and possibly conclude our analyses of the various pills and potions for which we applied.

THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

THE SUPPORT OF THE PRINCE OF WALES.

A PRIVATE meeting was held at Marlborough House on Dec. 20th, under the presidency of the PRINCE of WALES, to further the objects of the National Association for the Prevention of Consumption.

At the invitation of His Royal Highness there were present: The Marquis of Salisbury, Lord Rosebery, the Earl of Derby, Lord James of Hereford, Sir Samuel Wilks (President of the Royal College of Physicians of London), Sir T. Grainger Stewart (President of the British Medical Association), Mr. T. McKinnon Wood (Chairman of the London County Council), Lord Loch, Mr. Wernher (of the firm of Messrs. Beit and Wernher), Dr. J. W. Moore (President of the Royal College of Physicians of Ireland), Dr. J. Andrew (President of the Royal College of Physicians of Edinburgh), the Chief Rabbi, Sir James Blyth, Sir Richard Thorne, Mr. Walter Long (President of the Board of Agriculture), Dr. Thomas Barlow (physician to Her Majesty's Household), the Lord Provost of Edinburgh, the Director-General of the Medical Department of the Navy, the Director-General of the Army Medical Service, Mr. Shirley Murphy (medical officer to the London County Council), Dr. Grimshaw, Dr. Clement Godson, Sir William Priestley, M.P., Dr. Howship Dickinson, Dr. Playfair, Dr. Hermann Weber, Dr. J. E. Pollock, Dr. Woods, Sir John Brunner, Dr. Sidney Coupland, Sir James Sawyer, Mr. S. Neumann, Canon Rawnsley, Mr. James Knowles, Mr. E. Hulse, Mr. T. Mark Hovell, Sir Donald Currie, Mr. Bischoffsheim, and the members of the Organising Committee as follows: Sir William Broadbent, M.D. Lond., F.R.S. (chairman), Mr. Malcolm Morris (hon. treasurer), Dr. StClair Thomson (hon. secretary), Sir George C. W. Brown, Sir James Crichton Browne, M.D. Edin., F.R.S., Sir Ernest Clarke, Professor Corfield, M.D. Oxon., Dr. F. W. Burton-Fanning, Dr. Alfred P. Hillier, Dr. Constantine Holman, Professor John McFadyean, M.B., C.M. Edin., Dr. Isambard Owen, Dr. Vivian Poore, Mr. A. W. Mason (the President of the Royal College of Veterinary Surgeons), Dr. Arthur Ransome, F.R.S., Mr. C. Rube, Professor Burdon Sanderson, M.D. Edin., F.R.S., Mr. Frederick Treves, Dr. Dawson Williams, and Dr. Theodore Williams.

The PRINCE of WALES opened the proceedings by calling on Sir WILLIAM BROADBENT, chairman of the organisation, to deliver a statement on the work of the association.

Sir WILLIAM BROADBENT said:—May it please your Royal Highness, I have the honour to lay before your Royal Highness on behalf of the Organising Committee of the National Association for the Prevention of Consumption a brief statement of their objects and methods.

We learn from the returns of the Registrar-General that nearly 60,000 deaths are every year registered as due to tuberculosis in England and Wales alone, and to this number may be added a considerable percentage of the deaths set down to acute affections of the lungs in which tubercle has played an unrecognised part. Of these over 40,000 are from consumption, 6000 from tuberculous disease of the intestines and mesenteric glands, and 6500 from tuberculous meningitis. The destructive work of tubercle does not end here; 5500

deaths are attributed to other forms of tuberculosis, among which are diseases of the bones. Hump-back, hip-joint disease, disease of the knee, ankle, elbow, wrist, and other joints which cripple or disable so many children are the sign manual of tubercle.

This terrible waste of life with all the protracted suffering attending it and the distress, moral and material, which it involves is in great measure preventable. Already by the effects of subsoil drainage, by improved hygiene, by the higher general standard of comfort and cleanliness, by greater attention to ventilation and to the construction of dwellings, the number of deaths from consumption and other forms of tuberculosis has been reduced by more than 50 per cent. in fifty years. The single sad exception to this statement is that tabes mesenterica, the disease of the bowels in children traceable to tubercle conveyed by milk, has increased.

But while sanitary improvements have so far reduced the mortality from tuberculous diseases science has pointed out the way by which these ravages may not only be indirectly mitigated but directly prevented. It is now definitely known that consumption is a contagious disease, that it is communicated from person to person and from animals to man, and that it arises in no other way. It is not an inherited vice in the constitution which declares itself in course of time, but while some constitutions are more prone to it than others and while an unhealthy mode of life and unwholesome surroundings predispose to its attacks, every case of consumption is derived from some pre-existing case.

Phthisis with all the various forms of tuberculous disease is the work of a microbe—the tubercle bacillus discovered by Koch. This living organism is present in countless millions in the diseased lungs or intestines or bones. By its multiplication it blocks the minute blood-vessels, chokes the air vesicles, and destroys structures and by a poison or toxin which it forms it gives rise to febrile disturbance, nocturnal perspirations, and wasting. It is by transmission of these bacilli that tuberculous diseases of all kinds are spread.

The principal way in which they are conveyed from a diseased to a healthy person is by means of the expectoration which contains them in enormous numbers and which when dried is suspended in the atmosphere, especially of ill-ventilated rooms, in the form of dust and inhaled. Happily they are not present in the breath of the consumptive patient so that consumption is not contracted merely by breathing the same air or living in the same house with a sufferer.

Another way in which the bacilli are disseminated is in milk. Cows, unfortunately, are very subject to tuberculosis and sooner or later the bacilli find their way into the milk. Through milk so contaminated infants and young children become affected with tabes mesenterica, tuberculous meningitis, and diseases of the bones.

The flesh of diseased animals also may contain the bacilli.

If we could ensure the destruction of all the sputa of the sufferers from phthisis and secure a supply of milk and meat absolutely free from tubercle bacilli all the diseases due to tuberculosis which now cause one-seventh or one-eighth of the total number of deaths would cease from the land.

These facts are generally known throughout the medical profession and the precautions based upon them will be inculcated by the medical attendant. But the adoption of the necessary measures would, as we know from abundant experience, be very slow and would require many years, and if 70,000 persons die every year from tuberculous disease, which for Great Britain and Ireland is a very moderate computation, at least 200 new persons must catch the disease every day. It is the realisation of this fact which has called into existence the National Association for the Prevention of Consumption and Other Forms of Tuberculosis. The mission of the Association is to carry into every dwelling in the land an elementary knowledge of the modes in which consumption is propagated and of the means by which its spread may be prevented and thus to strengthen the hands of medical men throughout the country who are dealing with individual cases of this disease. To this end the public attention must be captured, the public imagination must be impressed, the defensive instincts of the general public must be aroused, and we do not hesitate to express our belief that your Royal Highness will by the single gracious act of calling together and presiding over this meeting save thousands of lives.

The objects of the Association can be stated in a few words. They are (1) to educate the public as to the means of preventing the spread of consumption from those already suffering from the disease; (2) to extinguish tuberculosis in cattle; and (3) to promote the erection of sanatoria for the open-air treatment of tuberculous disease.

It is only necessary here to indicate the spirit in which the operations of the society will be conducted. While making known the contagious character of consumption it will endeavour to allay the panic which arises in some minds when it is known that consumption is catching. It does not advocate the compulsory notification of consumption but it will urge upon sanitary authorities the desirability of insisting on the disinfection of rooms in which consumptive persons have died when notification of the fact is made through the certificate of death. Its method is instruction and persuasion, not compulsion. In particular it will seek to enlist the coöperation of the sufferers themselves, and when the victim of consumption understands that by observing the precautions recommended by the association he or she is protecting family and friends from the disease he or she will be careful to carry them out. On the other hand, the friends and relatives of sufferers and the public generally will in self-defence discourage and repress the filthy and unnecessary habit of expectoration in public vehicles and places of public resort, and we may expect railway companies and others to follow the example set in America of putting up notices pointing out the danger of the practice.

So again with regard to milk. The society recognises the fact that it is impracticable to stamp out tuberculosis in cattle by the immediate slaughter of all diseased animals, but it will insist that the public has a right to a milk-supply which shall be absolutely free from tubercle bacilli and shall not scatter death among the children of all classes of the community. It will earnestly advocate the testing of herds by tuberculin and the isolation of animals found to be affected, a method which has been attended with conspicuous success in Denmark, and it will urge upon district and county councils and all rural and urban authorities the supervision of cattle-sheds and of dairy farms and of all the agencies for the distribution of milk.

Another important matter upon which it has already memorialised the London County Council is the provision of public slaughter-houses where the inspection of carcasses can be carried out before the evidences of diseases have been removed.

Until tuberculosis is eradicated from among our cattle an indispensable precaution is to boil or sterilise all milk, especially that given to children. The sterilisation of milk is an easy and simple process and it ought to be done at home. Sterilisation on a large scale at the dairy is open to abuse and it may be so carried out as to impair the nutritive qualities of the milk.

The third great object of the association is the promotion of the erection of sanatoria for the open-air treatment of consumption and tuberculous disease generally. It aims not only at prevention but cure. The isolation and cure of those suffering is, however, the very best and most efficient preventive measure, since a consumptive patient once lodged in a sanatorium ceases to be a focus from which the disease spreads.

Your Royal Highness has visited Falkenstein and can bear witness to the provision there made for the open-air treatment of phthisis and of the success which attends it. Your Royal Highness may therefore well reproach us for lagging behind Germany in a matter of such importance. America also is in advance of this country, but it is only lately that the medical profession here has been convinced that the open-air treatment of consumption could be successfully carried out in this country. We have thought it necessary to send out patients on long voyages or to the South of France or to the germ-free atmosphere of the high Alps originally recommended by Dr. Hermann Weber, one of the pioneers in the hygienic treatment of consumption, who is here as a guest of your Royal Highness to-day. Now, however, experience gained in such diverse parts of the country as Edinburgh, Norfolk, and Ireland, to say nothing of the different winter resorts on the south coast, has demonstrated that most satisfactory results can be obtained at home. The chance of recovery, formerly the privilege of the favoured few, is thus open to all classes of the community. The Association, therefore, will advocate the erection of sanatoria for every large centre of population. The Poor-law authorities will sooner or later find that it is more economical to provide sanatoria where tuberculous paupers may recover than to send them to infirmaries to die. Municipalities will consider it their duty to defend the populations over whose interests

they watch from consumption as they now do from fever by the erection of sanatoria. And above and before all the charitable public generally and those whose sympathies are drawn towards sufferers from consumption by having lost parents, or children, or brothers, or sisters, or friends from this disease, will seize the opportunity of doing more for them than merely to smooth their passage to the tomb.

Meanwhile a beginning is to be made in London by a self-supporting sanatorium which will minister to the needs of the class which lies between the rich and the poor. The London partners of Messrs. Wernher and Beit have undertaken to erect and equip such a sanatorium at an estimated expense of £20,000, the construction and management of which will be under the guidance of the Association. As at Falkenstein any excess of income over expenditure will be devoted in the first instance to the payment of a small interest (2½ per cent.) on the capital and the balance to such purposes in connexion with the objects of the Association as may be determined by the committee.

This offer has been a great encouragement to the Organising Committee and we know that many benevolent persons are ready and waiting to come forward to supplement it by making provision for the poor.

The idea which animates the Association is that the prevention of consumption is a national duty in which the medical profession and the public can coöperate, the medical profession leading and guiding the movement. The Organising Committee have every reason to congratulate themselves on the interest which has been excited in all parts of the country. Branches are being formed in York, Norwich, Ipswich, Huddersfield, and other towns, and at York a considerable sum of money has already been raised for the erection of a sanatorium.

The impetus given to the work of the Association by the meeting here to-day under the presidency of your Royal Highness will greatly expedite the success of the Association in dealing with the gigantic task which it has undertaken.

Sir T. GRAINGER STEWART said: Your Royal Highness, I owe the honour of being asked to join this meeting to the fact that I am President of the British Medical Association and also occupy the chair of medicine in the University of Edinburgh. I speak in the name of the profession as represented by the Association and the Edinburgh School of Medicine also. I should congratulate the profession chiefly upon the fact that you, Sir, have been graciously pleased to summon this meeting. I congratulate the National Association for the Prevention of Consumption and also the profession upon the effective and luminous statement made by Sir William Broadbent in opening the discussion. I venture to say with regard to Scottish experience that there are two or three points worthy of notice. In the first place statistics show that Scotland is very much in the same position as England and Wales as described by Sir William Broadbent. I find on looking at the returns for 1896 that about 173 out of every 100,000 of the whole community died from pulmonary consumption; in Edinburgh about 170 per 100,000 died; in Glasgow the numbers are 192; and in Scotland generally 166. Thus in Scotland we are deeply interested in the question and have already had a good deal of attention directed to it. As a matter of fact evidence given before the Royal Commission shows that some of the dairy farmers in the neighbourhood of Edinburgh have made costly experiments. One who found on testing his herd of 34 milch cows that 64·4 per cent. of them were tuberculous set aside these in a separate place and did not use them for milk for supplying his customers. He replaced the animals and now he is able from an absolutely sound and safe herd to supply a milk which may be safely used without being sterilised or boiled and which is more pleasant to take and more safe for the community. He finds he gets a higher price for his product. We shall soon have many dairies absolutely safe in these respects. Another point with regard to Scottish experience which may interest your Royal Highness is that experiment with the open-air system has been fairly tested and carried out near Edinburgh. You, Sir, have visited Falkenstein—I do not pretend that the slopes on which the Victoria Hospital for Consumption stands compare with the splendid slopes of Falkenstein, but they have brought out results which have been astonishing. It is proved that in that hospital both night and day the windows can be kept widely open not only without injury but with positive advantage. I have seen patients leave my own wards in the Royal Infirmary to be treated there by the open-air treatment in a climate not famous for its clemency and these patients have improved rapidly and splendid results have been attained. Not only has this work demonstrated the success of the open-air treatment, but it has sufficed to diffuse a great deal of information.

Dr. MOORE (President of the Royal College of Physicians of Ireland) said: I wish to express] my acknowledgment of the compliment which is paid to my College in asking me to address a few words to this meeting. For my facts about the prevalence of consumption in Ireland I have to thank the Registrar-General for Ireland, Dr. Grimshaw. In the twenty years ending 1890 there were registered 1,800,000 deaths and of this in round numbers 200,000 were caused by consumption of the lungs alone. If we add to that terrible list of deaths the forms of consumption which kill in other ways than through the disastrous effects upon the lungs we find that tuberculosis was responsible for 11·2 per cent. of all the deaths. It is a remarkable fact that all the so-called zymotic diseases put together have not killed as many in Ireland as this one fell scourge of the human race, tuberculosis. It must be admitted by all hospital physicians that tuberculosis is a disease which is not best treated in our general hospitals. The surroundings are not the best for the consumptives themselves; there is a pathos about a hospital ward injurious to anyone seriously ill. Further, the consumptive patients have an injurious effect upon the others. In Ireland we have made a good start at treatment in special sanatoria. There is a magnificent hospital in Belfast—the Royal Hospital. We have also built a series of hospitals—one a convalescent hospital, one for children, and the third for consumptives—but funds unfortunately only admit up to the present of opening ten beds. Through the generosity of Earl Fitzwilliam some years ago a plot of ground in the county of Wicklow extending over nineteen acres was given free of rent for the purpose of the construction of a consumption hospital. It started into existence under the loving patronage of the Marchioness of Zetland. It was opened on March 19th, 1896, for the reception of 24 consumptive patients, 12 male and 12 female. The treatment adopted is the open-air treatment; the place lies midway between the sea and the mountains and its climate has been tested by observations taken for the last year and a half. Since opening the patients treated have been 200 in number. Of 164 patients who were discharged 2 died. The remaining 162 made an average gain of half a stone in weight. Many of the early patients have been at work since they left and some appear to be perfectly well according to their friends. That last statement I have personally corroborated. There is a point on which I have not yet made up my mind and that is the question of notification. If consumption is made notifiable it will be necessary to establish some machinery properly supervised by medical officers, and I am sorry to say that from some oversight the Local Government Bill for Ireland contains no provision for the establishment of county medical officers. A magnificent machinery exists in the country for teaching the people the danger of tubercle, and we owe it to Her Majesty the Queen who, with the womanly instinct for which she is loved, eleven years ago devoted a large sum of money for the purpose of providing nurses for the sick poor in their own homes. These nurses know all about the danger of tuberculosis and as they go to the homes of the sick poor in the cities and in the country can tell the people how dangerous contaminated expectoration is and how necessary it is to test the milk.

Sir JAMES SAWYER pointed out that in the arrest of other infectious diseases which have been successfully prevented the chief motive power has not been legislation but popular knowledge.

Dr. J. ANDREW (President of the Royal College of Physicians of Edinburgh) said that he supported all that Sir Grainger Stewart had put forward.

Professor MCFADYEAN said: In every animal that has the scourge of tuberculosis there are certain parts that contain the living germs of the disease and no fact is more firmly established than that any human being who takes such parts of an animal as food runs the risk of contracting the disease unless cooking or some other process can be relied upon to kill the germs. A very few years ago a more alarming estimate than is indicated by what I have just said was widely entertained because it was held by many that in the majority of tuberculous animals the germs were found in the whole body and no tuberculous carcass was fit for food. This is not borne out by recent investigations. We know now that in the tuberculous animal there are some parts containing the tubercle, but the greater part does not contain

germs and is not dangerous. That was the finding of both the Royal Commissions which have sat on the subject. But while recent investigation has thus shown that the danger is not so great as it was at one time supposed to be, the knowledge that we have recently acquired tends in quite the opposite direction. Speaking generally the individual animal is less dangerous, but there are far more animals dangerous to a certain degree than was suspected a few years ago. It is probably true of this country and all over the continent that not less than 20 per cent. of cattle sold for food are tuberculous. Tuberculosis, as Sir William Broadbent has remarked, is a common disease in milch cows and in a considerable proportion of milch animals affected by tuberculosis the disease attacks the udder and the milk is thus affected. There may be nothing about the milk to warn the individual who sells it, or the more unfortunate individual who drinks it, of its dangerous character. It is impossible to doubt, indeed we know as a matter of fact, that there is scarcely any legal obstacle to the selling of such milk. It is being sold every day and some human beings are being infected daily. When measures are devised for the safety of human beings the question of tuberculosis among animals must be taken into consideration. This Association may render great service by diffusing the knowledge that until tuberculosis can be eradicated from our domestic animals everyone can protect himself by thoroughly cooking meat and milk.

The Marquis of SALISBURY said: Your Royal Highness, Lords, and Gentlemen,—Sir William Broadbent has placed in my hands a resolution which he has desired me—nay, he has almost prescribed it to me—to move, and in these days of advancing democracy the only authority left is the authority of your doctor; otherwise I should have demurred to his request because I am unfit to comment upon this most important subject, the object of the present meeting, and I feel very unworthy to do so after the distinguished authorities who have given us the benefit of their opinion. I believe that it is true, as Sir William Broadbent says, that we are very much behind the world in these matters. We are behind the world in practical efforts. We are even behind the world in theories of the matter, for I believe it is quite a recent event that the contagious character of consumption has been fully acknowledged in this country. It is the public only who can effect a change and it is only by public knowledge that any real good will be done. Nothing has seemed to me more striking in the luminous statement of Sir William Broadbent or in the discussion following than the absence of all desire that the powers of the law should be brought into operation to carry out the objects of the Association. It is a snare which they should carefully avoid. They must be content with preaching the salutary doctrine which they hold and must not think of applying to the secular arm. Without alluding to any vexed questions we know that there are some difficulties which are attached to the carrying out of the decrees of medical science by the action of the law and the danger of any similar result would be very great in the present case. I see my right honourable colleague the Minister for Agriculture here and I speak, so to say, under his eye, but he will join me in saying that it would considerably prejudice the spread of sound opinion upon this subject if any attempt were made to procure or ensure sanitary conditions by any action of central or local authority. It must be taught; it cannot be enforced. I am afraid if you attempted to enforce the use of tuberculin, which has been referred to, you would find among the farmers many conscientious objectors who would object to the operation of your law. Let us be warned by past mishaps and I have no doubt that under the patronage of His Royal Highness, with the unequalled facilities which the medical profession has for spreading sound ideas on scientific matters among the population all over the country (through the machinery of nursing associations, by literature, by the action of the scientific missionaries who now spread themselves all over the country), you will be able to produce a sufficient recognition. The dangers of which science now warns us must be guarded against and in some years hence, and I have no doubt at an early period, when you have generated such a movement as this, the extinction to a very great extent of this terrible disease will come about. Great progress has already been made. There is, however, still much to be done. Whether it is done rapidly or slowly or whether it is done effectively or imperfectly will depend on the energy with which this Association labours at the work and especially on the assistance received from the medical profession. I will now propose the resolution which is as follows:—

This meeting desires to express its approval of the effort which is being made by the National Association for the Prevention of Consumption and other Forms of Tuberculosis to check the spread of the diseases due to tubercle and to promote the recovery of those suffering from consumption and tuberculous disease generally. It also commends the method adopted by the Association of instructing public opinion and stimulating public interest rather than the advocacy of measures of compulsion.

Sir SAMUEL WILKS said: I beg leave to second the resolution. The subject of tuberculosis in the form of consumption has received so much attention during the last few years with reference to its spread and its dangers that we think now we ought to receive the coöperation of the public in order to endeavour if not to suppress, at any rate to withstand, its ravages. As Lord Salisbury has just said it is only as recently as the past generation that this was looked upon as a kind of scourge hanging over the country. It is only of late years—I should think it was first due to increased means of locomotion when people could easily get out of this country, especially in winter time—that we were able to get air and sunshine for our patients, but they were only the richer people in the land. Some went to the Riviera, to the Engadine, to the Cape for the sea voyage and they came back cured. Not only is this so in my own medical experience, but in friends and gentlemen in my own profession I could count dozens of cases of men who have passed through life after being thus cured of consumption. This opinion has been strengthened from experiments made on the tubercle bacilli. It is found that if these are cultivated artificially in damp places they grow but that in sunshine they die. This is all corroborative of what I have said. I am told there is a remarkable illustration of this in the Zoological Gardens. There the idea used to be to keep up a high temperature in the houses of certain animals from the tropics; now they let these animals go out in the winter time into the fresh air and the mortality is considerably less. It might be said if all this is known that the patient could go to the doctor and he could get his prescription; but the prescription is a dear one, an expensive one. A poor clerk comes to you and you order him six months or twelve months abroad; he cannot afford it and he cannot do it. We want these sanatoria to place persons under the best conditions for what they specially require and these are sunlight and air. When I was at school I used to read about Diogenes in his tub who when visited by Alexander the Great said, "Get out of my sunshine." I thought that was rude and ill-mannered until five years ago when after I had had influenza I went to the seaside for air and sunshine and as I sat there in front of the sea a friend came before me and I said, without thinking of Diogenes, "Get out of my sunshine," and then for the first time I saw what a great philosopher that man was. I look upon this movement, Sir, as a national object and the proof of it is in the meeting here under your auspices, because with your discrimination you would not have undertaken this unless you had considered it a national object.

H.R.H. the PRINCE of WALES said: As chairman I have to read to you the resolution so ably moved by Lord Salisbury and seconded by the President of the Royal College of Physicians; it is as follows:—

This meeting desires to express its approval of the effort which is being made by the National Association for the Prevention of Consumption and other forms of Tuberculosis to check the spread of the diseases due to tubercle and to promote the recovery of those suffering from consumption and tuberculous disease generally. It also commends the method adopted by the Association of instructing public opinion and stimulating public interest rather than the advocacy of measures of compulsion.

The resolution was carried unanimously.

The Earl of ROSEBERY, in moving a vote of thanks, said: My Lords and Gentlemen,—I have the lightest and briefest task which has fallen to any of the speakers because it is to convey your thanks to His Royal Highness for promoting this meeting and presiding over it which he has done with his characteristic urbanity and dignity. I have come here entirely as an auditor and a learner to-day and I am not competent to speak of the high subjects which have been treated in so interesting a fashion, but I express the views of all, whether they come as teachers or learners, in saying how pleased we are to see the Prince of Wales restored once more. The first act after his recovery from his illness is to be once more foremost in good works and taking part in this Association which we all hope will do so much to prevent a terrible disease.

Mr. WALTER LONG, M.P., seconded the resolution which was cordially carried.

The PRINCE of WALES, replying to the vote of thanks, said: I beg to tender my thanks to the speakers for the very kind way in which they have moved this vote of thanks to me for occupying the chair. I assure you it has been a great privilege to preside at so interesting and so important a gathering. When my friend Sir William Broadbent asked me to take the chair I gladly assented because I felt that notwithstanding my want of knowledge of this particular subject, and possibly of medical subjects generally, and feeling that a more competent person than myself should have occupied the chair, still in doing so I take the chair to prove to you the deep interest I take in this very important subject. We have all listened to the able and clear statement which has been made by Sir William Broadbent which has proved to you all the great importance of the National Association for the Prevention of Consumption which has been organised. We have all listened with interest to the able speakers who are thoroughly masters of the subject under discussion and I am glad to think that in Scotland and Ireland their attention has been called to this subject so deeply and that good work is being done. Lord Salisbury alluded to our being backward in this country in making such efforts as might prove advantageous for stamping out this fell disease. I am inclined to think so too. I believe in Germany, Sweden, Switzerland, and America they have gone ahead of us and we should follow their good example. The three points which Sir William Broadbent alluded to were, first, educating the public to prevent the spread of consumption from those already suffering. Now it is obvious to all that this is important and the way in which much can be done is to extinguish tubercle in cattle. I agree with Lord Salisbury that to try to pass a law which would force farmers to perform operations on their cattle would possibly be unpopular; but still if people would sometimes sacrifice their cattle which are suffering from tuberculosis they would do more by good example in stamping out this complaint. I mention the matter because I have been informed that Her Majesty the Queen gave authority that thirty-six of her dairy cows at her Home Farm which on being tested by tuberculin were found to be tuberculous were to be destroyed. In regard to sanatoria, I have just alluded to how this disease should be stamped out, but when it exists the great object is to cure it. No doubt these sanatoria, one of which I visited at Falkenstein, and which impressed me greatly, are very useful. Our climate has been against our having them before. In Germany and Sweden and Switzerland the climate lends itself to this mode of life more than we find here. Though, I think, on the whole our climate is the best in the world, unfortunately we do suffer from vicissitudes of temperature and dampness which everyone knows is bad for consumption. I was much struck at Falkenstein at the sanatorium under Dr. Dettweiler which is a sanatorium that everyone would wish to follow in England. I was told that in the village at Falkenstein there was no case known of consumption the arrangements were so good, and there was no means of the villagers becoming contaminated. I do not know that there is any more for me to say. I can only repeat that not only do I take the deepest interest in this important subject, but if anything lies in my power to further this great object I shall only be too proud to do it and to give my assistance to this Association. I thank you for listening to me and for the remarks about my health the improvement in which has given me the opportunity of standing before you to-day.

Before leaving the Prince took the opportunity of thanking the London partners of Messrs. Werner, Beit, and Co. for their gift of £20,000 to the new sanatorium.

FREEMASONRY.—A meeting of the Æsculapius Lodge, No. 2410, was held at the Café Royal, Regent-street, on Dec. 14th, the Master, Bro. Surgeon-Lieutenant-Colonel H. W. Kiallmark, G.J.D., presiding. Bros. Pakes and Eaton were admitted to the third degree. Mr. Ridley Herschell and Mr. J. C. Earls were initiated into freemasonry. Bro. Dutton gave notice that at the next meeting he would propose that the Masters of the Cavendish and Sancta Maria Lodges for the time being be elected honorary members of the Æsculapius Lodge. After the business of the lodge was concluded the members dined together, some distinguished visitors being present.

THE AMERICAN ARMY MEDICAL DEPARTMENT IN THE SPANISH-AMERICAN WAR AND THE REPORT OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY.

THE investigation undertaken at the unanimous wish of the people of the United States for the purpose of inquiring into alleged mismanagement during the Spanish-American war and to endeavour to place the blame on the proper shoulders has now been proceeding for some weeks. A principal if not the chief charge brought against the authorities is that the medical attention given to wounded and sick soldiers was altogether inadequate and in many instances completely lacking; that some of the ships used for transporting invalid soldiers from Cuba were in a dirty and insanitary condition besides not being properly fitted for the purpose; and, lastly, that the health of the soldiers who remained in the country was menaced and often injured by the injudicious choice of camp sites and by the want of ordinary care in keeping these camps in a sanitary condition. The committee of investigation is still at its labours, so that until the final result of the inquiry is made public it is unfair to pass an opinion on the matter. In the meantime, however, the report of Surgeon-General Sternberg on the work of the American Medical Department during the war has been published. In this report General Sternberg freely admits that there were many defects in the organisation of the Army Medical Service, but claims that under the conditions existing at the time of the outbreak of war this inefficiency was unavoidable. Surgeon-General Sternberg says that the very small proportion of medical officers having experience of a military character impaired the efficiency of the department at the outset; that inadequate provision having been made for Hospital Corps men for the volunteer troops, in order to provide this corps with the necessary number of men recruiting officers were urged to secure suitable men and medical officers to effect the transfer of men from the line of the army: that 1700 female nurses were enrolled and employed at first at the general hospitals and later at the field division hospitals; and finally that ample supplies for six months were ordered immediately. With regard to the health of the troops Surgeon-General Sternberg says: "In my opinion the reduction of the age limit from twenty-one to eighteen years and the haste with which the volunteer regiments were organised and mustered into the service were responsible for much of the sickness which was reported in the early days of their camp life. ..... Soon after the newly raised levies were aggregated in large camps sickness began to increase progressively from causes that were so general in their operation that scarcely a regiment escaped from their harmful influence. These causes may largely be referred to ignorance on the part of officers of the principles of camp sanitation and of their duties and responsibilities as regards the welfare of the enlisted men in their commands. Medical officers, as a rule, were also without experience in the sanitation of camps and the prevention of disease among troops. The few who knew what should be done were insufficient to control the sanitary situation in the large aggregations of men hastily gathered together." Concerning the medical statistics of the war the report says: "My report presents tabulations compiled from monthly reports of sick and wounded received from May to September inclusive and representing a strength present of 167,168 men. These give full particulars of 1715 deaths, of which 640 were occasioned by typhoid fever, 97 by malarial fevers, and 393 by diarrhœa and dysentery. The death-rates for May and June, 46 and 70, were not in excess of those of the army in time of peace. In July the rate became somewhat higher than that of most well-cared-for cities, 2·15 for the month, or the equivalent of an annual rate of 25·80 per thousand living. In August it became excessive, 4·08 for the month, equal to an annual rate of 48·96 per thousand. In September the influence of the energetic measures taken in July and August to improve the health of the army becomes manifest in the falling of the death-rate to 2·45, or the equivalent of an annual rate of 29·40."

The lay papers in all parts of the United States, together

with some of the medical journals, have criticised adversely the management by the Army Medical Department during the war. Among the medical journals the *New York Medical Record* was foremost in raising a protest against some of the methods of conducting matters medical in the Cuban campaign and in an able and temperate article in its issue of Dec. 3rd commenting on Surgeon-General Sternberg's reports continues to discuss the question and says: "While the shortcomings charged against the medical department of the army are still fresh in the minds of the nation it is becoming and proper to view the statements set forth in that spirit of justice and impartiality which seeks only the truth and the lessons which it may be capable of teaching. Although the general impression created by the calm analysis of the situation is one scarcely favourable to the present organisation of the medical corps as to its capacity or resources, there is a general conviction that the best was done for the sick and wounded that was possible under the circumstances of conflicting authority, inadequate preparation, and the culpable want of forethought of the line officers." The article ends thus: "Our experience in the late war, dearly bought as it has been in much preventable sickness, suffering, and death, has offered us many striking object lessons in army organisation which will doubtless be of great service to us in the future. There has been demonstrated a pressing need of centralised power in the consistent distribution of those responsibilities which may make the army and all its different departments a grand and perfect machine. In every branch of the service there are too much antagonism of interest and too much shifting of blame from one to the other to make any break or starting-point in the convenient and bewildering round-robin system of common protection. So long as the present plan exists no change for the better need be expected. In regard to the transportation of food and medical supplies the quartermaster's department in its supreme and wide-reaching executive capacity decides absolutely all questions of emergency as to precedence and detail. Unfortunately the medical department is generally last of all considered and is made to wait its turn at the foot of the list. Ancient experiences in this line repeated themselves in the war with Spain with such disastrous results that an official investigation was made imperative. What the real outcome of the inquiry may be cannot be conjectured, but it is hoped that the great mass of testimony taken may ultimately eventuate in some formal recommendation for the reorganisation of our army supply system whereby the dreadful mistakes so familiar to all may be effectually prevented in the future."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6281 births and 3575 deaths were registered during the week ending Dec. 17th. The annual rate of mortality in these towns, which had been 19·1 and 17 8 per 1000 in the two preceding weeks, further declined last week to 16·6. In London the rate was 16·5 per 1000, while it averaged 16·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·9 in Derby, 11·7 in Croydon, 12 0 in Hull, and 12·4 in Burnley; the highest rates were 20·9 in Manchester, 21·5 in Swansea, 21·7 in Sunderland, and 21·9 in Nottingham. The 3575 deaths in these towns included 372 which were referred to the principal zymotic diseases, against 426 and 399 in the two preceding weeks; of these 103 resulted from diphtheria, 97 from measles, 60 from "fever" (principally enteric), 55 from whooping-cough, 33 from diarrhœa, and 24 from scarlet fever. No fatal case of any of these diseases occurred last week in Burnley; in the other towns they caused the lowest death-rates in Plymouth, Derby, and Wolverhampton, and the highest rates in Norwich, Swansea, Nottingham, and Bolton. The greatest mortality from measles occurred in Nottingham, Manchester, and Bolton; from scarlet fever in Swansea; from whooping-cough in Swansea, Cardiff, and Preston; and from "fever" in Swansea, Salford, and Sheffield. The 103 deaths from diphtheria included 40 in London, 10 in Swansea, 7 in West Ham, 7 in Liverpool, 7 in Leeds, 6 in Sheffield, and 4 in Birmingham. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Dec. 17th, was 3043, against 3162, 3142, and 3090 at the end of the three preceding weeks; 260 new cases were admitted during the week, against 234, 264, and 276 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 340 and 295 in the two preceding weeks, further declined last week to 283, and were 160 below the corrected average. The causes of 36, or 1·0 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Manchester, Bradford, Hull, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21 0 per 1000 in each of the two preceding weeks, declined to 19·4 during the week ending Dec. 17th, but exceeded by 2·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Perth and 13·1 in Paisley to 21·2 in Dundee and 22·2 in Aberdeen. The 584 deaths in these towns included 16 which were referred to whooping-cough, 12 to scarlet fever, 12 to diarrhœa, 10 to "fever," 8 to measles, and 6 to diphtheria. In all, 64 deaths resulted from these principal zymotic diseases, against 83 and 71 in the two preceding weeks. These 64 deaths were equal to an annual rate of 2·1 per 1000, which was 0·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 21 and 16 in the two preceding weeks, were again 16 last week, of which 9 occurred in Glasgow and 3 in Dundee. The 12 deaths referred to scarlet fever exceeded by 2 the number in the preceding week, and included 5 in Glasgow, 3 in Greenock, and 2 in Edinburgh. The deaths referred to different forms of "fever," which had been 10 and 11 in the two preceding weeks, were 10 last week, of which 6 occurred in Glasgow and 3 in Aberdeen. The 8 fatal cases of measles showed a further decline from recent weekly numbers, and included 5 in Glasgow. Of the 6 deaths from diphtheria 2 were recorded in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 147 and 163 in the two preceding weeks, declined again to 132 last week, and were slightly below the number in the corresponding period of last year. The causes of 26, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·6 and 25·4 per 1000 in the two preceding weeks, further declined to 25·2 during the week ending Dec. 17th. During the past four weeks the death-rate in the city has averaged 28·3 per 1000, the rate during the same period being 17·0 in London and 22·0 in Edinburgh. The 169 deaths registered in Dublin during the week under notice were within 1 of the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against numbers declining from 17 to 8 in the three preceding weeks; of these, 6 resulted from "fever," 5 from whooping-cough, 3 from diphtheria, 1 from scarlet fever, and not one either from small-pox, measles, or diarrhœa. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 1·6 both in London and in Edinburgh. The deaths referred to different forms of "fever," which had been 2 and 4 in the two preceding weeks, further rose to 6 last week. The fatal cases of whooping-cough, which had been 3 in each of the two preceding weeks, rose to 5 last week. The 3 deaths from diphtheria exceeded the number recorded in any recent week. The 169 deaths in Dublin last week included 29 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons exceeded the number recorded in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 60, or more than a third, of the deaths occurred in public institutions. The causes of 12, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

FLEET-SURGEON DUDLEY retires on half pay and is succeeded at the Royal Naval Hospital, Netley, by Fleet-Surgeon Standish O'Grady.

The following appointments are notified:—Surgeons: A. H. L. Cox to the *Victory*, C. Bradley, to the *Cambridge*, B. G. Heather to the *Magnificent*, T. Austen to the *Vivid*, and S. Croneen to the *Victory*.

ROYAL ARMY MEDICAL CORPS.

Captain Rawnsley embarks for service in India shortly. Major Hart is appointed Acting Principal Medical Officer, North-Western District. Majors Forman and Birrell have embarked for duty in India. Majors Wright, Russell, Stoney, and Power, and Captain Browne are *en route* to India in the transport *Dunera*. Major James and Captains Thacker and Buist arrive home next week from India in the transport *Dilwara*.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel Frederick Augustus Smyth (Bengal) retires from the service, as does also Lieutenant-Colonel Walter Conry (Bengal). Surgeon-General W. A. Catherwood, A.M.S., to be Principal Medical Officer, Bengal Command, vice Surgeon-Major-General T. Walsh, A.M.S., retired. Captain R. H. Maddox to be Personal Assistant to the Principal Medical Officer, Bengal Command, *pro tem.*, vice Major G. B. French.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain W. B. Moir, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Lieutenant David Livingston Hamilton, 4th Volunteer Battalion the Manchester Regiment, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Midlothian: Surgeon-Captain G. Mackay resigns his commission. 1st Worcestershire and Warwickshire: Arthur Charles Oldham to be Surgeon-Lieutenant. *Royal Engineers* (Volunteers): 1st Hampshire: Henry Fulton to be Surgeon-Lieutenant. *Rifle:* Galloway: The under-mentioned officer retires, with permission to retain his rank and to continue to wear the uniform of the corps on his retirement: Surgeon-Lieutenant-Colonel W. Lorraine. 1st Volunteer Battalion the Cheshire Regiment: Lieutenant Andrew Robertson Wilson resigns his commission and is appointed Surgeon-Lieutenant. 3rd Volunteer Battalion the South Wales Borderers: Surgeon-Lieutenant J. Abernethy resigns his commission. 1st Nottinghamshire (Robin Hood): Robert Henry Cordeux to be Surgeon-Lieutenant.

ABSCESS OF THE LIVER IN DUTCH INDIA.

During the biennium 1894–95 46 patients were admitted to the military hospital at Soerabaya in Java on account of hepatitis, the disease in no fewer than 25 instances being complicated with suppuration of the gland. In 2 of these 25 cases the presence of pus was not recognised until after death. In 5 the pus made its way spontaneously either through the lungs or by the bowels; 2 of these patients recovered and 3 died. 4 cases recovered after evacuation of the abscesses by simple puncture (in one of these cases injection of the sac was practised after the removal of the pus). In 5 cases the abscesses were incised without resection of ribs. One of these proved fatal. Finally, out of 9 cases in which incision was accompanied by resection there were 5 deaths. The total mortality, 11 out of 25, was consequently equal to 44 per cent., and the post-operative mortality, 6 out of 18, to 33 per cent. In the military hospital at Malang during the same period 12 cases of abscess of the liver were treated. Spontaneous evacuation occurred twice with 1 death. 1 case recovered after simple puncture and 2 after incision of gland without resection of ribs. Out of 7 cases of incision with resection 3 recovered, 2 died, and 2 were doing well at the close of 1895. The total mortality was equal to 25 per cent. and the post-operative mortality to 20 per cent. For the above notes we are indebted to the *Medical Journal of Dutch India*.[1]

VOLUNTEER AMBULANCE SCHOOL.

The prizes won by successful members of the above school were distributed by Lieutenant-General Sir George White, V.C., Quartermaster-General, on the evening of Wednesday, Dec. 14th, at St. Martin's Town Hall, Charing-cross. Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, said that the Volunteer year 1897–98 had been a most successful one for the school. The classes had been well attended and the percentage of passes was very high. Sir George White, introduced by the president, Major Andrew Maclure, said that it gave him great pleasure to find himself associated with such an institution, as it showed that volunteers had not enrolled themselves for the defence of their country without due consideration of its rougher and sterner aspects. Prompt and efficient medical aid was essential for the alleviation of that suffering which must be part of a field of battle. He could bear testimony to that alleviation. A Bohemian entertainment was given during the evening and was thoroughly enjoyed by a very large audience.

THE ROYAL ARMY MEDICAL CORPS.

We may remind our readers that an examination for 24 commissions in this corps will be held in London on Feb. 3rd next and the following days. It is well known that the Royal Army Medical Corps has for some time been below its establishment and that as a consequence the home tour has been very brief as compared with that which medical officers have to put in on foreign service. This is very naturally productive of much discontent. We should have thought that with the view of overcoming this difficulty it would have required more than 24 candidates and it is quite possible that the recognised strength of the establishment requires to be augmented to meet the increasing demands upon it. Be this as it may, it is only right to say that the Government has conceded what the medical officers of the Army asked for and there is therefore no longer any reason on that score why young medical practitioners and students should not turn their attention to the Royal Army Medical Corps.

Captain Charles Christie Fleming, R.A.M.C., employed with the Egyptian Army, has been made a Companion of the Distinguished Service Order in recognition of his services during the recent operations in the Soudan.

[1] Geneeskundig Tijdschrift voor Nederlandsch Indrl.

Correspondence.

"Audi alteram partem."

THE SOURCES OF PUERPERAL FEVER.

To the Editors of THE LANCET.

SIRS,—Permit me to offer a few observations upon the conclusions of Dr. Whitridge Williams cited in an annotation in THE LANCET of Nov. 26th: "We shall not go far wrong if we regard the vagina of a healthy woman as free from all such organisms as usually produce puerperal fever," and that "death from puerperal infection is always due to infection from without," and that it "is usually due to neglect of aseptic precautions by physician or nurse." This doctrine may entail a grave reproach upon the physician and may expose him to the charge of malpractice if not of manslaughter. Before accepting this absolute and dangerous doctrine it is well to analyse the grounds upon which it is constructed. In the first place it is fair to observe that Dr. Williams's clinical observations are limited to "40 cases of fever in the puerperium," occurring, it may be presumed, in a very limited field; secondly, that "the vaginal secretion of pregnant women does not contain the usual pyogenic cocci"; and thirdly, that as the vagina does not contain pyogenic cocci auto-infection with them is impossible." Thus Dr. Williams builds up his doctrine on the assumption that there can be no auto-infection without pyogenic cocci. This is simply begging the question. A fundamental fallacy in the pursuit of the problem of puerperal fever has been the search for one all-embracing cause. But the laws of biology are not so simple. We must be prepared to accept many facts and not hastily to reject any.

It is well at the outset to understand what is meant by the term "puerperal fever." Is it one definite constant fever? Or is it not more logical to use the term "fever in a puerpera"? This expression—I will not call it a definition—clears the ground for free unprejudiced observation and analysis. When we see a puerpera suffering fever, unbiassed by arbitrary doctrine, we study all the associated conditions.

In a proportion of cases undoubtedly we trace the action of a poison intruding from without. But there are certainly many cases in which the intrusion of a poison from without cannot be traced, and in which the essential causes spring in the patient's system. Fevers resulting from infection from without I originally distinguished by the term "heterogenetic" and those arising from processes inherent to the subject by the term "autogenetic." These terms have come into extensive use, but I have substituted for them "exogenetic" and "endogenetic." Nor are these quite satisfactory.

It is superfluous here to dwell upon the exogenetic forms of fever. It is enough to remember that many poisons, as zymotics, septic and others, account for a large proportion of cases. But do they account for all? When a woman is delivered there sets in at once a process of disintegration of superfluous tissue which has to be got rid of by disintegration, absorption, metabolism, and excretion. So long as the excretion of waste stuff keeps pace with its disintegration, absorption, and excretion the condition is physiological. But as soon as the physiological balance is disturbed the blood, becomes loaded with effete matters. Then any adequate disturbing factor may check the physiological disposal of the effete stuff, toxæmia ensues, and fever, endogenetic, sets in. The disturbing factors are many—chill, checking excretion by lungs, liver, kidneys, or skin; violent emotion or other form of nervous shock will often start fever. Evidence of the excretory and metabolic process in puerpery is proved by lactation, the *gravis odor puerperii*, and other phenomena. This *gravis odor* may be a source of toxæmia. This is seen in lying-in hospitals. Patients who go on breathing air tainted with their excretory emanations become easy prey to any disturbing influence. We may observe analogous conditions in menstruation, the analogue of gestation and puerpery. Who has not smelt the *gravis odor* of menstruation? Here there is no wound, unless we call the casting of the superficial cells of the uterine mucous membrane a wound. Yet there is absorption of effete matter which ought to be excreted. Arrest this process suddenly and there arises a form of toxæmia and fever analogous to the endogenetic puerperal fever. In some cases of retained menstrual fluid, absorption arises. To this condition I have applied the term "menosepsis."

The peculiar alteration of the blood induced by severe nervous and muscular exertion, like that which attends parturition, is illustrated in over-driven cattle, in animals hunted to death, in soldiers killed after a long fight. In these cases post-mortem rigidity comes quickly, is of short duration, and putrefaction soon begins. A woman who has undergone a severe labour presents similar phenomena. Thus we find in protracted labour a cause of endogenetic puerperal fever. I am, Sirs, yours faithfully,

Lingwood, Liss, Dec. 13th, 1898. ROBERT BARNES.

"DIPHTHERIA ANTITOXIN IN PRIVATE PRACTICE."

To the Editors of THE LANCET.

SIRS,—I have been much interested by reading in THE LANCET of Dec. 3rd and 10th the important papers on the above subject by writers of note, but I cannot help thinking that some of the deductions arrived at in the paper written by Mr. Bousfield are somewhat fallacious. Whilst advocating the very early use of antitoxin in suspicious cases he considers it to be a "diagnostic agent" as well as a curative one. To the former (which I have written in inverted commas) I must take exception. Two brothers, A and B, were admitted to the hospital here this year with typical scarlet fever rash all over the body and ulcerated throats. The throat of A was very like diphtheria on the left side and I gave two injections of 1500 B. units on successive days. The bacteriological report of the specimen sent on the day of the boy's admission was "No Klebs-Löffler," yet this boy's throat was quite clear in five days without any other treatment. B was treated with chlorate of potash, &c., but even after eight days there was very little difference in the appearance of his throat. To further test therefore the effect of antitoxin in bad scarlet fever throats would be somewhat interesting.

Mr. Bousfield later says: "Since the membrane clears off the throat within at most forty-eight hours it seems clear that there can be no further growth of virulent diphtheria bacilli and that a week probably represented the outside time during which it is necessary to isolate the patient." Surely this is a very dangerous dogma. I grant that as a rule the membrane clears off as stated, but I have seen it remain for more than five days. Is absence of membrane a proof of absence of virulence in the patient? For we know already that diphtheria may exist without the formation of membrane. There is absolutely no doubt in my mind that a large majority of patients are infective even in the absence of membrane for a much longer period than a week.

Diphtheritic patients in this small conjoint hospital containing 8 scarlet fever and 8 diphtheria beds are not discharged so long as the bacillus exists and I find that during the past four years patients have remained under treatment for not less than six weeks at any time, although for the past eighteen months formalin has been vapourised in the diphtheria wards every other day and the throats of some of the patients have been painted with formalin solution. I have now used the antitoxin over 100 times (34 times last year) and am therefore able to contribute my mite of observation on this important subject.

I am, Sirs, yours faithfully,

FRANK ARGLES,
Medical Officer of Health and Medical Officer to the Conjoint Hospital, Wanstead.

Wanstead, N.E., Dec. 16th, 1898.

To the Editors of THE LANCET.

SIRS,—In connexion with the admirable article by Mr. Bousfield in THE LANCET of Dec. 10th my experience with antitoxin in a country practice may offer some points of interest. From April 3rd, 1895, to Feb. 6th, 1896, I notified 41 cases of diphtheria, all of which recovered. Of these, 39 were treated with antitoxin. In 2 cases tracheotomy had to be resorted to as well and in both recovery was uninterrupted and rapid. All of the cases occurred in children under sixteen years of age except 3, 1 in a man aged thirty years, 1 in a woman aged thirty years, and the other in a woman over seventy years of age. Only in 5 instances did 2 cases occur in the same house, 4 times simultaneously and once the second case appeared three weeks after the first. In the first 4 instances the patients were all girls and the boys in the family escaped; in the fifth the mother was the first case and her two-year-old son was the second. In one instance 3 cases occurred in one house, the first on August 7th, the second on Sept. 12th, and the third on Nov. 21st; all were girls. Amongst the 41 cases 30 were females. Two cases were followed by paralysis. In every case the skin was washed first with soap and water and then with a lotion of carbolic acid and the syringe and all its parts were sterilised by boiling. In a few instances a small abscess nevertheless formed at the seat of injection and a few injections were followed by urticaria, although it struck me at the time as curious that when I injected two patients with the same serum one would get urticaria and the other would not. The injections were always made into the subcutaneous tissue of the abdomen and in no case was it found necessary to administer more than one injection. The membrane had in most cases disappeared within forty-eight hours and the employment of the remedy has been eminently satisfactory. The injection consisted usually of 10 cubic centimetres of serum supplied by the British Institute of Preventive Medicine. Although situated over 200 miles from London, by sending a telegram before 3 o'clock in the afternoon I was always sure of a supply before 8 o'clock the next morning. In one case, one in which tracheotomy was resorted to on account of the fulminating rapidity of the symptoms, it was not deemed advisable to wait until the following morning and I was fortunately able to procure some serum supplied by Messrs. Burroughs, Wellcome, and Co. from a local agent. Still, in most cases I could be satisfactorily supplied from London.

There is one other point which I am desirous of mentioning, not necessarily as an example to be followed. The last of the above-mentioned 41 cases occurred on Feb. 6th, 1896. From that time no other case occurred in my practice until May 21st of the following year when a part of the supply received from the last case was used without any ill effect, neither urticaria nor abscess nor any other untoward symptom resulting, and the same may be said of the remainder of the same supply which was used for my next case on April 21st, 1898, twenty-six months after it was received. With regard to the expense of the treatment I have looked at the matter

from many points of view and I cannot see that it is any more costly than any other form of treatment. It is certainly one which involves little trouble and anxiety and much satisfaction to both patient and medical man. To summarise, this treatment is one which may be easily and inexpensively carried out even in remote places with very satisfactory results.—I am, Sirs, yours faithfully,

JAMES A. SAMUEL, M.D. Leipzig, L.S.A.

Torpoint, Devonport, Dec. 20th, 1898.

To the Editors of THE LANCET.

SIRS,—My experience in the treatment of diphtheria with antitoxin may perhaps interest some of your readers. Mine is an entirely country practice and upon my coming here I learned that diphtheria had been prevalent for something like eighteen months with a high percentage of deaths. My first case occurred on Dec. 8th, 1897, and from that date till Oct. 23rd, 1898, I had 33 cases, varying from the mildest to some very severe ones. In every case antitoxin (supplied by Messrs. Burroughs and Wellcome) was injected at once in a full dose, repeated two days after if necessary, and in the very worst cases injected a third time. In most of the cases and in all doubtful ones a swab was taken and a bacterial examination was made to verify the diagnosis. I have had no deaths. In all but exceptional cases the patient has been convalescent—indeed, I might say well—within the week. Only one or two showed signs of paralysis, and this but slight and evanescent. Urticariæ appeared in about five cases and inflammation or other untoward symptoms in none. I invariably injected the antitoxin into the tissues of the back below the scapula. In June last seeing that the spread of the disease continued even after isolation of the patient for six weeks, the rural district council decided that every patient should be pronounced free from the Löffler bacillus after bacterial examination before being allowed out of quarantine. This showed strange results. In some instances patients were free at the end of three weeks, others not till the lapse of two months, the apparently mildest cases being often the longest to throw off the bacillus. From the institution of this procedure the disease gradually died, no other case having occurred since Oct. 23rd last. This experience leads me to the conclusion that antitoxin used at once in full doses, repeated, if necessary, a second or even a third time, is the only treatment which need be employed to bring about success; also that so long as the diphtheria bacillus is present in the discharges about the throat, as shown by the result of a bacterial examination of a swab taken therefrom, so long is the patient an infectious person and to be isolated.

I am, Sirs, yours faithfully,

W. J. NICHOLLS, M.R.C.S. Eng., L.R.C.P. Edin.,
Medical Officer and Public Vaccinator, No. 4 District, Chipping Norton Union.

Milton-under-Wychwood, Oxon., Dec. 19th, 1898.

To the Editors of THE LANCET.

SIRS,—In connexion with the above subject may I add my experience, though limited, as a general practitioner? Within the past year I have had 9 cases of diphtheria with a mortality of 1, or about 11 per cent., the fatal case being a child whom I did not see until the fourth day of illness and who was practically in a moribund condition before injection. I am in entire accord with Mr. Bousfield as to the great value of an early injection, and may mention that I also use the serum supplied by Burroughs, Wellcome, and Co., some of that I have used having been kept for over two months. The only complication I have seen following its use has been an erythematous scarlatinoid rash which appeared in one case some days after the temperature had fallen to normal and which spread from the site of injection slowly over the whole surface of the body, being unaccompanied by any constitutional disturbance or rise of temperature. Two of the cases had severe laryngeal complications, in one of which I had arranged to perform tracheotomy, but after an injection of 1500 units, the quantity I usually inject, in a few hours the dyspnœa had abated so much as to render operation unnecessary. I first saw this case on the fourth day of illness. In diphtheria affecting the larynx primarily (membranous croup) I have injected antitoxin in one case which I first saw three days after the commencement of the illness and in which there was urgent dyspnœa, with the most gratifying result. As regards the site of injection I prefer the lumbar region of the back close to the spine, as by placing the child flat on its stomach its movements are easily controlled and, unlike an injection into the abdominal parietes, there is no risk of a sudden struggle causing the needle to perforate the abdominal wall.

I am, Sirs, yours faithfully,

H. C. BEASLEY, L.R.C.P., L.R.C.S. Irel.

Ashford, Middlesex, Dec. 19th, 1898.

To the Editors of THE LANCET.

SIRS,—Some of your correspondents seem astonished that diphtheria antitoxic serum is not universally used in private practice. I think I can enlighten them a little on this point. I, like one of your correspondents, have acted as assistant medical officer to one of the Metropolitan Asylums Board hospitals and there I was so convinced of the good results obtainable by the use of serum in cases of diphtheria that when recently I gave up hospital work for private practice I determined to adopt its use. I therefore purchased at a cost of a guinea an antitoxin syringe similar to that used at the hospital. But on looking up the price of the antitoxic serum in Parke, Davis, and Co.'s price list I found that 16,000 units (at 17*s.* 6*d.* per 2000 units) would cost £6 18*s.* I may mention that at the Metropolitan Asylums Board hospital at which I worked 8000-16,000 units was no uncommon dosage for a single case during the first forty-eight hours and I have seen 24,000 units administered. Then, too, to be of the greatest benefit the antitoxic serum must be immediately obtainable and that in many places means that it must be stocked by the practitioner himself. But to stock a perishable article like the serum means an additional expense.

Perhaps, Sirs, some of your readers will kindly advise the private practitioners who work in those districts in which sanitary authorities do not provide serum and in which, as is sometimes the case, practices include patients who have only small or moderate incomes, as to the ways and means of carrying out this admirable treatment. In particular, who should pay for the serum? Apart from the question of the cost of the serum the operation itself of injection, though very simple, has undoubtedly several deterrent characteristics, which make it more difficult to apply in private than in hospital practice—(*a*) it is painful to the patient; (*b*) the struggles of the child, if such the patient be, alarm the friends and relatives; (*c*) the injection tumour, though transient, is pretty obvious to the naked eye; and (*d*) time and trouble must be spent in antiseptic precautions. The least failure in these precautions means an abscess, and an antitoxin abscess is particularly prone to give rise to sloughing of the surrounding tissues.

I am, Sirs, yours faithfully,

Bournemouth, W., Dec. 17th, 1898. H. E. G.

"VITALITY."

To the Editors of THE LANCET.

SIRS,—You as well as your readers will, I am sure, agree with me in thinking that for the discussion of this question of "Vitality" a liberal amount of your space has been assigned. As I shall ask you next year to allow me to bring before my brother practitioners some further communications with reference to the bearing of "Vitality" upon the nature of morbid changes and upon the practice of medicine, I am anxious that your readers should not be tired of my work and therefore hope that for the present you will decree the "closure." Bear with me, however, while I draw attention to the letter on "Vitality" in THE LANCET of Dec. 3rd, page 1506, the writer of which considerately provides me with a more than adequate reason for declining further discussion for the present. He has appalled me by comparing my silent, peaceful, intangible "vitality" with horrid subterranean fires and dreadful violence, the last remains of antevital phenomena persistent during millions of æons—to us inconceivable, unknowable, and unthinkable. "In the growth (!) of Mount Vesuvius and that of an oak tree," he says, "I see a great similarity." Well,—considering that my spirits have risen rather high in consequence of the favour with which my views on "vitality" have been received by your readers I may be pardoned if, finding it rather difficult to be serious, and at this festive season, I call attention to a most curious and comical "similarity" between Vesuvius and "vitality" which are undoubtedly

alike—in the number of their letters and in the number of their syllables, and do they not both begin with a V?

In conclusion let me propose that with due consideration and respect we consign to unfathomable volcanic depths our poor old "cell" with its walls and its non-living "contents," its supposed mechanical contrivances, its physical properties, and its dead and dying protoplasm, and let us look forward in hopeful confidence to the coming century and the gradual rise of living bioplasm, that lives and moves and forms and dies, and to the time not far off when the human mind shall be freed from its artificial fetters long imposed; and in accord with reason, shall demand its vital supremacy and acknowledge its transcendant position in the life world, which in times of comparative darkness as regards *natural knowledge* was accorded to it by tradition, contemplation, and thought—a position which by the advance of new knowledge and research will become for ever certain and secure. Let the human mind accept its great responsibilities and no longer bow to the reckless efforts to intimidate it and perplex its judgment with wordy sophisms forged to force it to believe that man is but one of the innumerable forms derived from the overwhelming vastness of lifeless matter, of which he sees around him and can study and know but an infinitesimal portion—man said to be one with the mechanisms he designs and makes—man asserted to be but one of the infinite powerless helpless outcomes of the material universe and passive immutable blind law!

I am, Sirs, yours faithfully,

Dec. 3rd, 1898. LIONEL S. BEALE.

*** This correspondence must now cease.—ED. L.

"A CASE OF DEATH FROM DIABETES MELLITUS IN WHICH THAT DISEASE GAVE NO PREMONITORY SYMPTOMS."

To the Editors of THE LANCET.

SIRS,—The following case, bearing a close resemblance to the one recorded by Dr. T. Wilson Parry in THE LANCET of Nov. 26th, 1898, came recently under my notice. The patient, a delicate-looking boy, aged eight years, was admitted to the Nottingham City Isolation Hospital on Sept. 3rd, 1898, suffering from a mild attack of scarlet fever. On Oct. 5th the patient who up to that time had progressed very favourably complained of headache and nausea. His urine on examination showed a specific gravity of 1025 and a faint trace of albumin. During the next two days the patient expressed himself as feeling quite well, though the slight albuminuria still remained. At 2 A.M. on Oct. 8th the patient woke suddenly from a sound sleep and commenced to scream with acute abdominal pain. As he was very constipated olive oil and simple enemata were given and a small, hard, dry motion was passed. The patient seemed much exhausted after this action of the bowels and aromatic spirit of ammonia was given as a restorative. Shortly afterwards the pain in the abdomen was relieved and the patient went quietly to sleep. At 7.30 A.M. he woke and passed a large motion of the same character as before. This was immediately followed by a sudden general collapse. At 8 A.M. the patient's condition was as follows: he was lying on his back semi-conscious; he could be roused when spoken to sharply but his answers were unintelligible; his face was pinched and drawn and there was much cyanosis of his lips and ears; his eyes were wide open, the pupils were dilated equally and reacted very slightly to light; his pulse could scarcely be felt at the wrist and his extremities were very cold; his heart sounds were weak—140 per minute; there were no murmurs; his respirations were slow, deep, and sighing, but nothing abnormal could be detected by examination of the chest. Examination of the urine gave the following result: the colour was pale, reaction was acid, the specific gravity was 1040, with a trace of albumin and a very large quantity of sugar. The coma gradually deepened and the patient died at 1 P.M. on Oct. 9th, thirty-five hours after the onset of the first symptom.

The chief interest in this case, as in the one recorded by Dr. Parry, lies in the sudden onset of fatal symptoms. The boy's parents stated that previously to the attack of scarlet fever he had always been a very healthy child and that he had certainly not had any of the usual symptoms of diabetes. For five weeks immediately preceding his death the patient was under close observation in this hospital and I am convinced that during this period and up to Oct. 8th his symptoms differed in no way from those of an ordinary healthy child convalescing from a mild attack of scarlet fever. The patient's urine had never to my knowledge been tested for sugar previously to the morning of Oct. 8th; the specific gravity had, however, been taken on several occasions and had never exceeded 1025.

I am, Sirs, yours faithfully,

T. O'NEILL ROE, M.B. Lond.,
Resident Medical Officer, Nottingham City Isolation Hospital.

THE GENERAL MEDICAL COUNCIL AND PRELIMINARY EXAMINATIONS.

To the Editors of THE LANCET.

SIRS,—I am instructed to send you the following table which was drawn up in this office from the returns supplied to the Medical Council by the various examining boards, including those for the Navy, Army, and Indian Medical Services, and submitted to the Education Committee when preparing the report quoted in Mr. Eve's letter to your journal of Dec. 17th. By an oversight in drafting the returns were described in the first lines of the paragraph quoted as if they came from the examining boards for the medical services only. These lines should read as follows: "During the years 1892–1898 returns have been made to the Council on behalf of the examining boards, including those for the Navy, Army, and Indian Medical Services, regarding those candidates who showed deficiency in general education." The necessary correction will be made in the report before it is issued to the public.

It will be observed that the summary of the statistics given in the remainder of the paragraph, and the conclusions drawn therefrom in the following paragraph of the report are in accordance with the figures in the table submitted to the Education Committee.

I am, Sirs, yours faithfully,

H. E. ALLEN,
Dec. 21st, 1898. Registrar of the General Medical Council.

Table showing the Numbers of Candidates reported as having been Deficient in General Education with the Preliminary Examinations passed by them during the Years 1892–1898.

—	1892.	1893.	1894.	1895.	1896.	1897.	1898.	Total.
Royal University of Ireland... ...	1	—	1	—	—	—	—	2
College of Preceptors	1	9	2	—	—	1	1	14
Royal College of Surgeons in Ireland	2	4	—	—	—	—	—	6
University of Dublin	—	2	—	—	—	—	1	3
University of London	—	2	—	—	—	—	—	2
*Apothecaries' Society of London	—	7	2	—	—	—	1	10
Intermediate Education Board of Ireland (junior grade)...	—	2	—	—	—	—	—	2
Educational Institute of Scotland	—	1	—	—	—	—	—	—
University of Aberdeen	—	—	1	—	—	—	1	2
*College of Physicians and Surgeons of Manitoba...	—	—	1	—	—	—	—	1
*Queen's University (Ireland) ...	—	—	1	—	—	—	—	1
University of Edinburgh	—	—	1	—	—	—	—	1
*Faculty of Physicians and Surgeons, Glasgow	—	—	—	—	1	—	—	1
University of Glasgow	—	—	—	—	1	—	—	1
Royal College of Physicians and Surgeons in Ireland	—	—	—	—	—	—	1	1
Totals	4	27	9	—	2	1	5	48

* Examinations not now on the Council's list.

The original letter from the War Office calling attention to deficiencies in preliminary education appears in the Executive Committee's minutes for February, 1891. In 1893 seven persons were reported by the India Office (particulars not given). Also in 1893 one candidate, whose name could not be traced in the Students' Register, was reported by the

Conjoint Board of the Colleges of Physicians and Surgeons of Ireland. In 1896 one Army candidate, name not given, was reported for bad spelling. In 1897 one Army candidate was reported for bad spelling.

INFANTILE INSUSCEPTIBILITY TO VACCINATION.

To the Editors of THE LANCET.

SIRS,—It may be assumed to be generally accepted that there are several different causes which lead to the declaration that an infant is "insusceptible" to vaccination; well-known statistics such as those of Dr. Cory seem to show that vaccination performed thrice unsuccessfully by no means implies an actual insusceptibility to vaccinia and no doubt in a large majority of cases returned as "insusceptible" the vaccinator has been at fault either by scratching too minute an area of skin or by using inactive lymph, or, as has often been found, the mothers have prevented the success of the operation by purposely washing or otherwise interfering with the "places" immediately the vaccination has been completed. It will probably be agreed, however, that if such causes of failure are set aside there is a small residuum of cases truly insusceptible in the sense that vaccination of infants properly performed with efficient lymph on three occasions with intervals of a few weeks or months between them has failed altogether; and most vaccinators would recognise a degree of partial insusceptibility where out of several insertions of efficient vaccine over a considerable area made on each of two or more occasions at most a single small vesicle has resulted.

The purpose of my letter is to inquire of those who have had large experience of vaccination whether any information can be furnished of the relation, if any, between such truly insusceptible or partially insusceptible infants and the condition as to vaccination or variolation of the parents—particularly of the mothers. In the case of an infant born to a mother actually suffering from small-pox there are recorded instances in which the infant, vaccinated on several occasions with efficient lymph and remaining exposed to variola, has developed neither vaccinia nor variola. This appears to be the extreme case of true insusceptibility dependent on the maternal condition. Are there known comparable instances in which an infant has been born to a mother actually suffering from vaccinia and has proved insusceptible to vaccinations properly performed with efficient lymph? And, going further back, what has been the condition as to insusceptibility or partial insusceptibility of infants born to mothers who have suffered from variola or vaccinia before but not long antecedent to parturition? And, again, how long after birth does this insusceptibility last?

Beyond two cases recently under my observation of infants whose mothers had been successfully revaccinated shortly before commencement of pregnancy and who, after several vaccinations with lymph perfectly efficient and active when used in other cases both before and after these failures, presented in one case no reaction and in the other a single small vesicle on the second time of vaccinating, I am unable to contribute any facts upon the subject. But the matter has considerable interest and in Gloucester, Middlesbrough, and other places where no doubt there has lately been a considerable number of mothers vaccinated during pregnancy or having small-pox during or immediately antecedent to pregnancy there may have been several opportunities of observing what, if any, has been the degree of insusceptibility of their infants to vaccination.

I am, Sirs, your faithfully,

Chiswick-lane, W., Dec. 9th, 1898. G. P. SHUTER.

"THE 'OPEN-AIR' TREATMENT OF TUBERCULOSIS."

To the Editors of THE LANCET.

SIRS,—When my letter on the "open-air" treatment of tuberculosis was inserted in your issue of Nov. 26th, that letter was written in London. This is dated from Arosa, at a height of over 6000 ft. in Switzerland. My letter has called forth a few remarks, one or two of which I should like to notice. I think Dr. Lionel Beale exactly hits it off when he says that life to be spent "in the contemplated sheds in many parts of England in such weather as we have lately enjoyed, would not be happy," and he might have added anything but beneficial. Then "M.O.H." proposes to erect at a cost of some £200 a heated greenhouse or glasshouse. One point seems to be entirely omitted and that is, as I before tried to emphasise, the essentials of these Alpine resorts—viz., intense *dryness* of the air, absence of wind, an intense *cold* dryness, brilliant hot sunshine, and lastly, the automatic expansion constantly going on of the lung under the atmospheric conditions such as cause the barometer to stand at from 24 in. to 23 in., and I still maintain that none of these conditions are in any way present or can be produced in England at any time of the year. Either the necessity for treatment under these conditions is a complete error or the method of building sanatoria in England is a mistake. Certainly the methods or theories in the treatment in England or in the high Alps in no way resemble each other. The conditions are, and must be, entirely different. I write as regards the *cure*—the permanent cure in many cases—of pulmonary tuberculosis, and I do really believe that the establishment in England of such sanatoria, though leading to possible improvement at the time owing to the greatly improved hygienic conditions and surroundings, will never in the same or even in more than a very minor degree lead to the arrest and cure of pulmonary tuberculosis.

I would add that the suggested cost of the glass erection suggested by "M.O.H." would more than pay for two seasons in the high Alps and he seems also to miss one of the chief points, and that is that the air in his "house" would be of necessity breathed and rebreathed. It is like applying a dirty dressing to a wound and it is only by being in the absolutely open air—not in rooms with even the windows open—that the same air is never breathed twice over The healthy lung may not actually suffer from inhaling the air over more than once—though it can certainly do it no good—but to the diseased lung the air breathed should be absolutely pure and this can only be obtained out of doors and not inside any building. I would finish by adding that Dr. Lionel Beale's description of the weather—four days of damp fog and wet and wind—more than fully confirms what I say about the impracticability of really carrying out the true "open-air" treatment of tuberculosis in England. I think I may say that unless it has been seen in its entirety as carried out here and in other high health resorts it is impossible to appreciate one-tenth of its benefits or the advantages to be derived from it or the actual methods employed.

I am, Sirs, yours faithfully,

Arosa, Dec. 14th, 1898. A. G. P. GIPPS.

"COPYRIGHT IN PRESCRIPTIONS."

To the Editors of THE LANCET.

SIRS,—You were good enough to publish a letter f om me on the above subject some time ago[1] in which I advocated a scheme which would limit the use of prescriptions to the purposes for which they were intended, by granting copyright in them to their authors. By this means it would be easy to prevent a prescription written for a particular person at a particular time and in particular circumstances from abuse by being made up over and over again for an indefinite time and used at times and in manners and perhaps even by other persons which were never contemplated by the physician who was the author of the prescription. It is so clear to my mind that the author of a prescription should have control to such an extent of the way that it is applied that I feel sure that such an arrangement as I suggest must be brought about sooner or later, both as a matter of bare justice to medical men and also as conducive to the public welfare. A case that strongly enforces the desirability of such a scheme being carried out has lately come to my knowledge and is as follows:—

An inquest was held on Dec. 14th by Mr. Troutbeck, the coroner for Westminster, on the body of a lady, aged about fifty years. The jury returned a verdict of "Accidental death from an overdose of chloral hydrate." The following facts were given in evidence. The deceased had bought on Dec. 9th a 12 oz. bottle of a solution (syrup?) of chloral, containing 80 grains to the ounce, at one of the so-called coöperative stores. This bottle was obtained by means of a prescription that had been written for the deceased's husband who had died five years previously. His widow (the subject of the present inquest) had had it made up frequently

[1] THE LANCET, July 16th, 1898.

since. The manager of the drug department of the said stores stated that it was a common thing to make up prescriptions of long standing and that he had even made up a prescription as ancient as twenty-seven years! How often might not the Pharmacopœia have been altered in this time?

I think that the above example bears out what I formerly said and speaks strongly in favour of my views, and I would ask for opinions as to the best course to pursue. Would it not be the simplest to do as I suggest and bring the subject before the Copyright Commission (which I understand is to resume its sittings), so that the requisite provision may be embodied in the next Copyright Act?

I am, Sirs, your faithfully,

F. LUCAS BENHAM, M.D., M.R.C.P. Lond.

Elizabeth-street, S.W., Dec. 17th, 1898.

"REGINA v. WALLACE."

To the Editors of THE LANCET.

SIRS,—I thank you for the able leading article in THE LANCET of Dec. 17th on my case and also for the expressions of sympathy therein. There are one or two points in the case of interest to the profession generally apart from the fact that any medical man is liable to be charged similarly.

When I saw the girl first she was menstruating. She had headache, sickness, pains in the back, and a history of irregular menstruation. I also learned that she had worn a Hodge's pessary for a displacement. She menstruated again in March which fact was denied by the Crown though entered in my day-book along with the mixture she got for the pain. It was also denied that she had been irregular, though Dr. Daly of Eastbourne stated that he was told the same thing, only when he inserted the Hodge, having previously examined her, he could not say whether she had a hymen or not as he did not look for one. She missed April, having gone to Brighton and Reigate at her usual time of menstruating. When she came home on April 30th I saw her and prescribed iron. Off and on till May 13th she had sickness, pains in the back, and headache, all of which symptoms she had when she was menstruating in February. On May 13th she was very ill, all her symptoms were more pronounced, and she fainted; the headache was intense. This was the time she ought to have come on. I ordered hot fomentations round the pelvis. She was better in the evening. I reinserted the ring pessary on May 18th. On May 20th and 21st she had a "show." On May 25th I saw her. She had been delirious for two nights, had a temperature of 101·5°, a rapid pulse, and a tongue in keeping with these phenomena. That was the condition previously to the use of the sound as a repositor and a mechanical stimulant. The enlargement of the womb was very slight and it was fairly moveable and seemed to be of normal depth when I used the sound.

Because the girl had a miscarriage and I, like an honest fool, told the mother that the use of the sound had no doubt caused the miscarriage, I was arrested on a sworn statement, which was afterwards said to be false by the woman who swore it and denied also by the girl herself, who was alleged to have said I assaulted her when she was in a state of semi-collapse consequent on the pain caused by the removal of a 2 in. rubber pessary. Yet this was quite sufficient for the Crown to bolster up a case against me and with the help of a detective inspector who *swore* that he had examined my books and that there were no entries after March 12th, and yet on my visiting book which was on me when arrested every visit down to May 31st was in it and not a date was disputed when they were produced in court. I say with all this I was kept in Holloway Gaol eight weeks and finally allowed out on bail of three sureties of £500 *each* and myself in £1000, and after a lapse of six months tried and acquitted before Mr. Justice Hawkins who when he had summed up left the Crown not a leg to stand on.

I am, Sirs, yours faithfully,

Beckenham, Kent, Dec. 19th, 1898. DAVID WALLACE.

CLEANSING THE LESSER PERITONEAL CAVITY.

To the Editors of THE LANCET.

SIRS,—In a clinical note in THE LANCET of Dec. 17th, 1898, under the heading of "Perforated Gastric Ulcer" Mr. Verrall has somewhat confused statements of mine contained in a paper which I read before the Brighton and Sussex Medico-Chirurgical Society last Nov. 3rd and since forwarded for publication. I gave prominence to the cleansing of the lesser peritoneal cavity and advised that the great omentum should always be opened in operation for perforated gastric ulcer. 1. To ascertain the condition of the posterior wall of the stomach. 2. To flush by introducing the nozzle of the irrigator the lesser cavity of the peritoneum which was sometimes the site of abscess in perforated ulcer even of the anterior wall, produced either (*a*) by the passage of gastric contents from the greater cavity to the lesser at the time of perforation or (*b*) by the gastric contents forced through the foramen of Winslow by the irrigating fluid at the time of operation. As I nevertheless advocated irrigation in preference to sponging I urged that the lesser cavity should be flushed not less thoroughly than the greater.

I directed the attention of members present to this suggestion, stating at the time that so far as I was aware it was a new one and that the condition of the lesser cavity had hitherto been neglected. Mr. Verrall remarked at the meeting that this was a new point and said that he thought it strange that it had been hitherto overlooked.

Although I find my recollection confirmed by that of others present at the meeting, proof of which I have enclosed privately, I should not have troubled you with this had I not felt that the good faith of the statement contained in my paper seems to be impugned by my colleague in his communication to THE LANCET last week.

I am, Sirs, yours faithfully,

Brighton, Dec. 17th. WILLOUGHBY FURNER.

*** We hope to publish Mr. Furner's paper next week.—ED. L.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

To the Editors of THE LANCET.

SIRS,—Will you oblige me by inserting the enclosed resolution which was passed on the occasion of the final annual general meeting of the London Post-Graduate Course?

That this meeting, having learnt with pleasure that another scheme for post-graduate work has been organised which will have the advantage of a central college and that most of those who have taken an interest in the London Post-Graduate Course are now concerned in promoting the new one, thinks it desirable that the London Post-Graduate Course should now terminate its labours.

Thus, after nine years of useful work this organisation gives way to the Medical Graduates' College and Polyclinic, which it is hoped will be largely instrumental in making London the greatest centre in the Empire for post-graduate study.—I am, Sirs, yours faithfully,

FLETCHER LITTLE, M.B. CANTAB.,
Hon. Sec. Medical Graduates' College and Polyclinic.

Chenies-street, W.C., Dec. 20th, 1898.

THE SEAMEN'S HOSPITAL SOCIETY AND ITS VISITING STAFF.

To the Editors of THE LANCET.

SIRS,—The "honourable apology" of the committee of the Seamen's Hospital Society is obviously insufficient and is followed by a confused attempt at explanation and extenuation which makes it practically no apology at all. Such as it is it has not reached the visiting staff in any shape or form except as a publication in the *British Medical Journal*, and it has been published in that paper only.

The committee state in the *British Medical Journal* that they do not contemplate the transfer of all tropical cases to the Branch Hospital. At least four times previously they have refused this information to the visiting staff of the *Dreadnought*. There are other matters at issue between the committee and us than the premature publication of Sir Henry Burdett's letter and the unauthorised statements contained therein. As some of the visiting staff of the *Dreadnought* were intended to be teachers in the proposed school it was obviously improper and open to misconstruction for the committee to be in consultation with the physician of the Branch Hospital without the knowledge of his assumed future fellow medical teachers of the *Dreadnought*, both of them much senior to him in the

service of the society. Even the statement of the committee that they have been in full and constant consultation with the visiting staff of the Branch Hospital cannot be allowed to pass.

The ophthalmic surgeon, who probably would have told us of what was going on, was like ourselves excluded from all information. His name was lately published in the list of the advisory committee without his consent, and it has now by his request been removed from it.

The committee quote an extract from Mr. Chamberlain's correspondence with them. It would be more satisfactory to have it *in extenso*. Are we to understand that the offer of public money came from the Colonial Office solely to increase the accommodation of the hospital to which the medical adviser to the Colonial Office is attached, that the committee deliberately kept their visiting officers of the *Dreadnought* in ignorance of their scheme until it had been decided to accept this offer, and to become responsible for the expenditure of this public money? If so, was this done with only one possible teacher of tropical medicine then at their disposal—the medical adviser to the Colonial Office himself?

The committee in their memorandum have referred to the assumption by this gentleman of the title of physician to the Seamen's Hospital, Greenwich (235 beds), when he was physician to the Branch Seamen's Hospital, Victoria and Albert Docks (18 beds), and say that we objected to his being so described. Dr. Manson really so described himself in Kelly's "London Medical Directory," 1895, Churchill's "Medical Directory," 1896, in the list of contributors to Davidson's "Hygiene and Diseases of Warm Climates," and in the *British Medical Journal*.

There is abundant evidence in the minute-book of the Seamen's Hospital Society and elsewhere to show that he was elected a physician to the Branch Seamen's Hospital at the Victoria and Albert Docks on the same day that Mr. Gunn was elected ophthalmic surgeon to the Seamen's Hospital Society. To this mistaken action of Dr. Manson's we took exception and for it he apologised. The matter has not hitherto in this controversy been publicly mentioned by us, although it might have ultimately become necessary, as we understand that this was the reason the committee deliberately refused to let us know of the proposed school.

Because the physician to the Branch Seamen's Hospital, Victoria and Albert Docks, was asked in 1896 why he described himself as physician to the Seamen's Hospital, Greenwich, the visiting staff of the latter are to have no voice in matters closely concerning them in 1898. Such has been the judgment of a committee that Sir William Broadbent has written "is unworthy of confidence." Resenting this criticism, they say they do not gather that the visiting staff have viewed their invitation as an insult or would join in Sir William Broadbent's protest. The visiting staff most cordially join in this protest against the treatment they have received and against the omission of parts of Sir Henry Burdett's letter. They regard the latter proceeding as unfair and misleading.

As the explanatory memoranda of the committee were not sent to any except a carefully selected *clientèle* from which we were excluded, it more than ever behoved the committee to omit nothing in the letter bearing on the present attitude of the visiting staff of the *Dreadnought*.

We are, Sirs, yours faithfully,

JOHN CURNOW, M.D., F.R.C.P.
JOHN ANDERSON, M.D., F.R.C.P.
G. R. TURNER, F.R.C.S.

Dec. 20th, 1898.

ACTION BY THE PHARMACEUTICAL SOCIETY.—At the Stonehouse County Court on Dec. 12th the Pharmaceutical Society brought an action to recover from Louis Fowler of Devonport a penalty of £5 for each of three infringements of the Pharmacy Act of 1868—viz., keeping "open shop" for retailing poisons and with using the designation of "chemist." The defendant admitted that he was not a pharmaceutical chemist although he had a qualified pharmaceutical chemist for his partner. Evidence showed that the defendant had used a label with an assumed name ("Livesay") and "dispensing chemist" written upon it and had also supplied two persons with oxalic acid and chlorodyne respectively. Judgment was given for the plaintiffs and the defendant was ordered to pay two penalties of £5 each for keeping "open shop," but the court did not think that he had rendered himself liable to a penalty for exhibiting the designation of "chemist."

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

SECOND YEAR.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1668.)

To cope with the recrudescence of typhoid fever measures have been adopted which were not in force last year. As soon as a case is notified an inspector visits the house and fills up a form stating the condition of the drains, &c. If the house has a privy the inspector dissolves a tablet of corrosive sublimate in a pail of water and pours the water into the privy. He then leaves a pail, the ordinary metallic slop-pail with lid, for the use of the patient. At the bottom of the pail there is some sawdust mixed with carbolic acid. Instructions are given that all excreta from the patient must be kept in this pail and not thrown into the closet or privy. The pail is taken away every day and a clean one left in its stead. Some two miles from the centre of the town there is a vast expanse of vacant marshy ground redeemed from the sea where the sewer outfall is situated close to the pumping-station for raising the sewage. Above the main sewer is a road which stands some 15 ft. higher than the surrounding soil and pools of water. These pools are often 6 ft. deep and into one of them the typhoid dejections are thrown and the pails are then washed. There is no dwelling within a distance of about a mile. The pool will be filled up with earth or road sweepings, and it is solemnly declared that no buildings will ever be erected on this spot; but who can thus foretell the future? Nobody can defend this method of disposing of the typhoid dejections, but it is urged that it is only a temporary expedient pending the construction of a destructor. It is difficult to say why these dejections are not burnt even though there be no destroyer. The sawdust is inflammable; a little naphtha would render it still more inflammable, and it would not be necessary to add much more fuel to make a bonfire which would ensure perfect destruction and purification.

The patients may go to the hospital connected with the workhouse in the Lisburn-road and there are also a few beds for paying patients at the Royal Hospital. It is scandalous that so large and wealthy a town as Belfast should not have proper isolation and fever hospitals. The practical result is that the vast majority of the patients are nursed at home, though in most cases their homes are too small and crowded for such a purpose. The rule is that an officer shall call every two days and leave disinfectants wherever there is a case of typhoid fever. When the patient recovers or dies or is removed to the hospital the house is disinfected.

As a consequence of these measures it might be anticipated that at least those houses where a case of typhoid fever had actually occurred would be put in good order. If the sanitary authorities cannot proceed at once against all the owners of bad property they might in any case enforce the necessary alterations in the houses where cases of contagious fever had occurred. Yet—incredible as it may seem—this has not been done. The last time I was in Belfast I visited some of the worst quarters and houses of the town and described them in THE LANCET. On the present occasion I have visited some of the newest and what are supposed to be the better streets and also some of the houses where there had been cases of typhoid fever and where as a consequence it was to be presumed everything would have been put in order. The result of this investigation was as surprising as it was disappointing. My first visit was to a house in ——street. Here a patient suffering from typhoid fever had been removed to the hospital and apparently the house had been disinfected. It was provided with a water-closet situated in a small back-yard. On lifting the closet seat I saw that there were rat-holes close by the syphon which stood under the pan. On pulling the string to flush the closet I found that the water came out and splashed in the direction of the rat-holes. There was a distinct smell of sewage. The patient was a young woman who had slept in a back room close to this disjointed and leaking closet and the inhabitants of the house complained of the bad smell which came from this place. The yard is carefully paved but it is

uneven so that the water does not all flow to the gully leading to the drain. This house, I was informed, stands on made-up ground, formerly a hollow which had been filled up with all manner of filth. The sanitary inspectors could not alter the nature of the subsoil but they might have sought to prevent the ground becoming still more foul by the leakage from a broken or disjointed closet. Close by there is a small shop where bread, cakes, biscuits, bacon, and other articles of food are sold. The owner of this shop had two daughters who had acquired considerable popularity and were much esteemed in the neighbourhood. Both these young women were struck down by the fever and both of them died, and their brother is now also ill. This dramatic occurrence has attracted much attention. The sanitary inspectors have been over and over again to the house. It has been disinfected and lime-washed throughout and after so much and such disastrous sickness it is only natural to expect that nothing would be neglected to render the dwelling more wholesome. Passing through the shop and a small back room I reached the yard. Here a wooden shanty had been built to hold empty cases, and the yard itself was much encumbered with boxes, &c. In fact, the premises are too small for the business, and it would be very difficult to clean out and dust properly a place so crowded with cases and the miscellaneous goods which constitute the tradesman's stock. The closet was in the yard but not far from the bedroom windows. To my great surprise I discovered that in spite of the numerous visits of the sanitary inspectors the pan of the closet was quite loose. It rested on the syphon trap but was not jointed and could be pushed to one side or the other or lifted right off. The trap itself seemed firmly set in the ground and could not be moved, but on flushing the closet I found that some water jutted out beyond the trap and near to the wall at the back of the closet. There were two leakages—one where the pan rested on the trap and the other beyond the trap, probably at the joint between the trap and the soil-pipe. Thus and in spite of the three cases and two deaths from typhoid fever occurring in this house, nothing had been done to put the drains in order, and yet without applying any smoke or water test it was easy to see that they leaked. It is difficult to conceive a more glaring instance of absolute neglect. This is all the more scandalous as the condition of the closet not only endangers the life of the inhabitants of the house but may contribute to contaminate the food sold in the shop to numerous customers. The two houses just described had had cases of typhoid fever and it was for that reason that I visited them. I now, however, entered a house close at hand but selected haphazard without knowing anything of the history of the place, and here again I found that the pan was not cemented on to the trap but was quite loose, wobbled about on being touched, and that a portion of the water of the flush escaped on to the floor of the closet instead of flowing down the soil-pipe.

Going to a neighbouring street composed of very small cottages my attention was attracted by a street door which suggested that the house had been besieged. A portion of the panels had apparently been kicked away. The apertures in this wreck of a door were large enough to admit the passage at least of a child. Inside the house bore an equally ruinous appearance. There was no furniture. A straw mattress on the ground did duty for a bed. There was fæcal matter on the floor inside the house and all over the back-yard where it mixed with stagnant water. There was no water-closet but an overflowing uncovered privy which gave forth the most horrible stench. The next-door house was hardly any better. The front door, it is true, had not been smashed and there was some slight attempt at furniture—a few planks nailed together to imitate chairs. The privy in the back was in a similar condition to that of the house first visited, and fæcal matter mixed with the stagnant water amid the ill-assorted tile flagging of the yard. There was a case of fever in the back room where the window overlooked the stinking uncovered privy, and in the front room a child, six months old, was suffering from congestion of the lungs. The squalor, the dirt, and the stench were appalling. A little further down the same street I noticed a medical man's carriage, or rather it was an Irish jaunting car. I found that there was a child suffering from typhoid fever and that the patient was going to be removed to the workhouse infirmary. This was the third case from this same house and the wonder is that there was anyone remaining in such a place to tell the tale. In the back-yard I saw the same sort of ghastly uncovered privy, but in this instance there was not even the pretence of a closet seat. There was a wall rising some 2 ft. above the side of the hole which constituted the privy and which might have supported a seat, but no seat had been placed there. The yard drain was covered with a plank of wood. It was untrapped. Under the bed in the back room, separated from the yard only by the wall of the house, a large hole could be seen which from time to time was filled up with foul-smelling water that came in from the yard. The boarding of the floor was rotten and there were large holes in it, so that the smell of the polluted earth and foul water beneath reached without hindrance the persons who slept above. Although three cases of typhoid fever have occurred in this house people are still allowed to live in it and nothing has been done to alter this shocking state of affairs. Surely, if a water-closet cannot be put into this house the privy might be cleaned out and rendered watertight, the yard might be properly paved and drained, and measures might be taken to prevent the formation of pools of sewage immediately under the bed in the back room. Now that three cases of typhoid fever have occurred in this house is it not time that some such measures should be taken? To merely whitewash walls and sprinkle disinfectants about is worse than doing nothing. Thus again I found another house in the same neighbourhood where a girl had typhoid fever so severely that little hope was entertained of her recovery. Here the house had been disinfected and whitewashed a day or two before my visit; but the inspector had not examined the closet and yet it was easy to see that the pan was loose, also the inhabitants complained that bad odours came from it. Now from this house, and apart from the case of typhoid fever referred to, a little boy had been removed to the hospital on July 15th last. He also was suffering from typhoid fever, nevertheless nothing had been done to the place before the month of November. In the house next door a part of the yard was boarded over and converted into a stable for horses. Here the water-closet pan was also loose. The pavement of the yard was not firm and squirted up dirty black water when trodden upon. In the house opposite there had been a case of typhoid fever, but in this instance the bed of the patient had been burnt, and this is the only case of effective disinfection I have to record in regard to this neighbourhood.

My next series of visits was to a district which had recently been flooded. Overflows from a main sewer were, I was informed, recently constructed and communicated with the Blackstaff rivulet. But on this particular occasion instead of the sewer overflowing it was the stream which overflowed into the sewer and forced the sewage back into the streets and houses. In a little street consisting of white-washed cottages I visited a dwelling where the privy in the back-yard was on a higher level than the ground-floor living-room. Here the water of the flood rose to a height of about 2 ft. In consequence of the higher level of the back-yard the door leading to it was barely 4 ft. high and it was necessary to stoop considerably to pass through. There was no trap for the yard drain, but a simple hole had been made in the wall which separated the yard from the back passage running behind all the houses. This hole went straight to the drain which passes down this back passage and thus the water and the smell rose freely from this passage drain into the back-yard which only measured some 8 ft. square. To make matters worse 3 ft. of this space were taken up by the privy. Thus the atmosphere was polluted by both drain and privy. When the water of the flood came rushing out of this drain in the back passage and out of the gullies in the street in front it brought all manner of filth into the houses. This occurred during the night and when the inhabitants came down in the dark from their sleeping room they plunged into water up to their knees. On the subsidence of the waters there was an awful stench from the dirt deposited on the floors and walls of the rooms, yet no measures whatsoever were taken to clean and dry these houses. The inhabitants had to do what they could at their own expense. In the house which I visited there had been a case of typhoid fever last August, yet the drain from the yard was left in the condition just described.

Behind a row of houses in —— street I came upon several cowsheds which to my utter surprise I found had been registered—that is to say, sanctioned by the municipal authorities. On one side of this long narrow back-yard was a row of privies which in some cases had been packed to overflowing with stable manure. But there was

also a large amount of manure piled up in the yard. Nor was the yard properly paved. There were some rough uneven stones which facilitated rather than prevented the formation of pools of stagnant water and liquid manure. The cows were kept in small, dark, ill-ventilated stables which were not drained to a sewer. The liquid manure from the stables found its way to a small cesspool in the yard outside the stable door. This tank or cesspit was covered only by a wooden door, and if it rained heavily the rain-water which accidentally reached this inefficiently protected cesspit caused it to overflow into the yard. Formerly a man was employed to periodically empty this cesspit and the tenants had to pay 3*d*. a week extra in rent to have this done for them. But the man fell ill with fever and never returned. The tenants have to empty the cesspit themselves, though they still have to pay the 3*d*. per week. The liquid manure taken out of the cesspit is simply poured on to the surface of the yard and then it flows away into a drain which, I was told, is partly a pipe and partly a brick drain. The stench which this operation occasions is so terrible that several inhabitants asserted that they feel sick for the whole day. A woman volunteered the statement that her son had on one occasion emptied the cesspit but he was so ill afterwards that he had not ventured to do it again. When it is remembered that the cows are milked in this yard and amid these foul surroundings the danger of the situation will be better understood. But there was danger of specific as well as of general contamination, for in one of the houses forming part of this yard and where the inhabitants own one of the cows three children have suffered from typhoid fever. In answer to my inquiries I was assured that the children were not removed to the hospital but had remained in the house during the whole time of their illness. They were not even provided with pails, so that their dejections were thrown out into the open privies in the yard and close to the spot where the cows were milked. Yet these stables are registered—that is to say, they are sanctioned and approved by the authorities.

On leaving these abominable stables I came across one of the recent so-called improvements. This consisted of a sewer ventilating shaft going up the wall of a two-storey cottage. It was a 4½ in. pipe made of light metal and terminating about a foot above the edge of the roof. There was a hood placed above the pipe apparently for the purpose of deflecting the odour downwards into a window which was barely 2 ft. below. The inhabitants of the house complained of the bad smell blown down from the pipe through their bedroom window.

(To be continued.)

THE EPIDEMIC OF TYPHOID FEVER IN BELFAST, 1898: DR. LORRAIN SMITH'S REPORT.

(FROM OUR BELFAST CORRESPONDENT.)

WHEN the outbreak of typhoid fever in Belfast reached such a height as to alarm the citizens the Public Health Committee, at the suggestion of the chairman (Alderman Graham, M.D. R.U.I.), appointed Dr. J. Lorrain Smith, Lecturer on Pathology at Queen's College, Belfast, to investigate the cause of the epidemic and as a result that gentleman has for the past few months been busy at work, and as the outcome of this most careful study he has presented to the city corporation of Belfast a most original, able, and thoroughly scientific report. As Dr. Smith points out, as the probable causes of such an outbreak of typhoid fever two factors present themselves. These are: (1) deficiency in drainage and general arrangements for the disposal of refuse and infective material; and (2) possible infection of the water-supply.

As to the first factor, he admits that the insanitary conditions in Belfast which have been pointed out by experts in sanitation are of such a nature as to contribute materially to the spread of the infection from case to case and possibly to originate the outbreak, and especially in a city where typhoid fever is endemic these conditions if left unremedied would render futile any attempts at the extinction of the disease.

As to the second factor (contamination of the water-supply) Dr. Smith shows that there is no doubt that there had been recently cases of typhoid fever in one of the catchment areas and that no precautions were taken to prevent the infection of the water. The problem Dr. Smith set himself to solve was, Did the infected material reach the water-supply and was it in actual operation during the epidemic? This question only a bacteriological investigation would answer and it involved *in limine* the study of the micro-organisms which actually produced the disease. He first endeavoured to discover the cause of the disease in fatal cases and he found by examining the spleen and by making cultivations of the micro-organisms present there that there was evidence of two groups of bacilli which are in structure closely related—viz., the typhoid bacillus of Eberth and the bacillus coli communis of Escherich. The next part of the investigation was to determine the presence of one or both of these in the water, and to carry out this thoroughly Dr. Smith took over thirty samples of water at various infected houses in Belfast and in addition he had an apparatus at work continuously in Queen's College Pathological Laboratory by which he obtained a sample of the water bacteria during September and October. From these sources he failed to isolate the typhoid bacillus, but he had no difficulty in isolating a large number of varieties of the bacillus coli communis. Its presence indicates that the water is polluted with intestinal excreta and its significance in relation to the disease is increased when, in addition to possessing the typical cultural and structural characteristics, it has a high lethal power when injected into small animals, such as guinea-pigs. Certain of the bacilli isolated by Dr. Smith possessed all these characteristics. Now comes the most interesting part of Dr. Smith's report and I quote from his own words: "If this bacillus (bacillus communis coli) is actually a factor in the production of the disease one would expect that the blood of patients suffering from the disease would exhibit a certain reaction of infection to the bacillus known as the 'clumping reaction' (a full explanation of this point is given in the Appendix). On closely investigating the coli bacilli which I had isolated from a typhoid spleen I found that a number of those isolated gave this reaction with the blood of the typhoid patients in a certain percentage of the cases with which the typhoid bacillus had given a reaction. On examining in the same way the coli bacilli from the water it was found that certain numbers of the growth isolated gave the same reaction to the blood of typhoid patients. I have examined the blood of about 200 cases of typhoid fever, including, for the sake of comparison, some other centres (Lurgan and Dublin), and in the time I have had at my disposal I have done my utmost to test the evidence which this line of investigation furnishes, and I have come to the conclusion that we have in the coli bacilli which occur in the water a form of microbe which is directly concerned in the infection of typhoid fever. I give in detail the evidence on this point in the Appendix, but I may state here that 40 per cent. of the cases reacted to the coli bacillus, while at the very highest about 60 to 70 per cent. of the cases reacted to the typhoid bacillus. This latter percentage was obtained with a form of typhoid bacillus which gives exceedingly high results. Typhoid bacilli derived from other sources give fewer reactions. The highest percentage of reactions—viz., from 60 to 70 per cent.—is a low average, but this low average is due to the high standard adopted in the observations." To sum up, Dr. Smith says that the general result of his investigation is: 1. In the presence in the water of the typical bacillus coli communis there is evidence of contamination with intestinal excreta. 2. Certain of these bacilli exhibit their relationship to the process of infection in typhoid fever (*a*) by their lethal effect on small animals and (*b*) by showing the reaction of infection when exposed to the blood of typhoid fever patients. In conclusion, Dr. Smith reports that short of discovering in the water the typhoid bacillus also and thereby giving absolute proof regarding the primary cause of the epidemic he knows of no stronger bacteriological evidence than that which he has adduced in favour of the conclusion that the contamination of the water is one of the causes of the outbreak of the disease in Belfast.

From Dr. Smith's report it will be seen that there are many points of similarity between the epidemics of typhoid fever in Maidstone and in Belfast. In both the water-supply at a certain point was contaminated by typhoid excreta. In Belfast (the evidence is given in the Appendix A of Dr. Smith's report) it would appear that in January, 1897, three

or four cases of typhoid fever occurred at a farm at the catchment area known as Stoneyford and portions of the discharges from the patients were thrown into the manure heap the liquid from which flows into the adjoining stream and thence into the Belfast water-supply. This occurred in January, 1897, and in March of the same year the epidemic broke out in Belfast. Dr. Smith thinks it very probable that these cases were the actual origin of the outbreak. Further, he states that from reports received of suspicious cases occurring recently among the inhabitants of the Stoneyford area the matter demands, not only now but as long as the present water-supply is used, the constant attention of the sanitary officers. The second point of similarity between the two epidemics of typhoid fever at Maidstone and Belfast is that in neither case did observers find the specific typhoid bacillus in the water, while at Maidstone as well as at Belfast the bacillus coli communis was present in abundance. In criticising the reports of those who examined the water at Maidstone Dr. Sims Woodhead stated that the presence of the bacillus coli communis should be regarded as evidence of contamination provided that the bacillus had certain biological characters and was pathogenic to animals. Certain of the bacilli isolated from the Belfast water, Dr. Smith states, answer to all Dr. Woodhead's criteria. There is, however, one point of distinction between Maidstone and Belfast, and that is the very important fact which Dr. Smith admits that in Belfast typhoid fever is endemic. From Dr. Smith's report there naturally follow two practical suggestions: (1) the Water Commissioners must take greater care in reference to their catchment areas and they must specially look to it that in their new works in the Mourne Mountains as well as in the reservoir at Carryduff the utmost precautions shall be put in force to prevent the least trace of local contamination; and (2) because this report of Dr. Smith seems to put the cause of the outbreak of typhoid fever on the infected water-supply the Public Health Committee must not think that they have nothing more to do than to blame the Water Commissioners. They must remember that their own expert and adviser, Dr. Smith, states in his report that "the insanitary conditions in the city which have been pointed out by experts in sanitation are of such a nature as to contribute materially to the spread of infection from case to case and, possibly, to originate the outbreak and, especially in a city where typhoid is endemic, these conditions if left unremedied would render futile any attempts at the extinction of the disease." The duty of the Public Health Committee is to push on with the sanitary reforms which they have already, I am glad to say, inaugurated, no matter what the cost may be, so that the disease may cease to be endemic.

In the Appendix to his report Dr. Lorrain Smith deals with: (*a*) observations on the catchment area at Stoneyford; (*b*) methods of analysis; (*c*) the number of bacteria present in the water; (*d*) the reaction of infection known as "clumping reaction"; and (*e*) the bacillus coli communis.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Sittings of the Plague Commission.—The Bombay Improvement Scheme.—The Pasteur Institute at Hyderabad.—The Faulty Administration of the Plague Regulations.

IT must be admitted that the sittings of the Plague Commission have not so far resulted in discovering anything new. The four days' examination of certain prominent officials has only reproduced what was known twelve months or more ago and what has all been published before. The Commission consists of Professor T. R. Fraser, M.D.Edin., LL.D., F R.S., Professor of Materia Medica in the University of Edinburgh, president; Mr. J. P. Hewett, C.I.E., I.C.S., Secretary to the Government of India, Home Department; Professor A. E. Wright, M.D. Dub., Professor of Pathology in the Army School, Netley; Mr. A. Cuming, I.C.S., of the Bombay Presidency; Dr. M. A. Ruffer, of the Egyptian Sanitary Department; and Mr. C. J. Halifax (secretary). The object with which the Commission has been appointed is—as was stated in the Government resolution—to inquire into the following questions: (1) the origin and outbreaks of plague; (2) the manner in which the disease was communicated; (3) the effects of the curative serum; and (4) the effects of the preventive serum. Many acute observers have already formulated their knowledge on these points and have expressed their opinions that plague in man is communicated from the lower animals and probably in most cases from the rat; that it extends chiefly by the spread of the disease among the lower animals but that the habitation in some way also becomes a source of infection; that, so far, no serum possessing curative properties can be said to have been discovered but that the preventive fluid has decided powers to diminish the liability to infection as well as to diminish the risks of the disease amongst the inoculated.

The first day was occupied with the examination of the Hon. Mr. Wingate (the Plague Commissioner) and of M. Haffkine. The evidence of the former consisted in giving a brief outline of the epidemic and of its spread to different parts in the Bombay Presidency. He enumerated the several measures adopted by Government with the aid of local bodies to check its progress and minimise its effects. Information on this head has already been published in a very comprehensive Government Report by Mr. Nathan. M. Haffkine explained the process of preparing the plague prophylactic fluid and the experiments first conducted to test its efficacy. He also laid before the Commission some statistics to show its results.

On the second day M. Haffkine gave further evidence concerning inoculation, its effects on different individuals, the dose, the method of cultivating and sterilising plague bacilli, his early curative serum, and its failure. He stated that he had not succeeded in detecting the plague microbe in rooms occupied by plague patients, but that experiments were *now* being conducted on the effect of exposure on artificial cultures in houses where the roofs had been removed, also as to the efficacy of disinfectants and the effect of cowdung on the microbes, and the duration of their life within it. He argued that there was no evidence to show that inoculation increased the sickness or death-rate from general causes amongst the inoculated. He stated that his researches had been restrained by consideration for the popular feeling with regard to experiments on animals.

On the third day Surgeon-General Bainbridge was examined. He candidly admitted that his experience was largely derived from official reports. He thought more laboratory inquiry was wanted. (This seems a curious statement because there were many men experienced in bacteriology and well able to perform this work, who were sent out from England for plague duties and to whom Surgeon-General Bainbridge in his official capacity might have entrusted this investigation.) With regard to the connexion between rats and plague, what he could say was that the rats were generally affected by plague and that before the outbreak in man the rats became ill and died. The attacks on human beings followed very closely. He supported the recognised sanitary measures—the isolation of the sick, the segregation of the occupants of infected houses, the cleansing and disinfection of the houses, the examination and detention of travellers, and the disinfection of persons. He now accepted inoculation as a prophylactic, although at the outset he was unwilling to do so. Dr. Galcott, representing Professor Lustig, explained the method of preparing his serum and gave some results obtained at several hospitals. He admitted that the results were not very satisfactory up to the present time. Dr. Viegas described how he observed and reported upon the earliest cases which had been discovered in Bombay.

On the fourth day Colonel Weir, health officer to the Bombay Municipality, was examined. He gave a description of the sanitary conditions under which the masses of the people lived and referred to the very limited powers which the Corporation possessed under the Municipal Act. He dwelt particularly on the overcrowding, to which there was no limit. He pointed out the course which plague took in spreading throughout the city and gave numerous statistics. He described how the measures at first taken were thought to be unnecessary and cruel. He expressed his belief in the destruction of rats in order to prevent the development and spread of plague. He showed the incidence of plague amongst the dwellers on the different storeys of the large *chawls*—the percentage of deaths to attacks being on the ground floor, 84; on the first floor, 74; on the second floor, 67; on the third floor, 59; on the fourth floor, 48; and on the fifth floor, 45. He strongly supported inoculation against plague and had done so from the commencement.

The Improvement Trust has begun work and promises to effect very great changes in the sanitary condition of

Bombay. Several schemes of improvement are ready and one of them is likely to come up for sanction almost immediately. The proposal is to buy up the whole property of one large and thickly populated district—not one street only but a large area. Money will be raised by loan on the land of the properties, the houses will be pulled down and new and wider streets will be laid out, while sanitary dwellings will be constructed to replace the present overcrowded *chawls*. One district only will be taken at a time. While this is being done the people will be turned adrift to find accommodation wherever they can, but it is anticipated that the displacement of the people will not be of long duration. It is obvious, however, that other districts will be excessively overcrowded for the time being and that a twelvemonth at least must elapse before the new buildings will be ready for occupation. Probably also 25 per cent. of the population of the given area will have to find permanent accommodation elsewhere. The distinguishing feature of the new trust is that it can deal with large areas. The rebuilding of houses for 20,000 evicted people cannot be done in a day.

Notwithstanding the detailed account of the proposed Pasteur Institute for Hyderabad which was published apparently on high authority I have it from the Secretary to the Nizam's Government that the question has not yet been laid officially before the Government.

The public are still put to considerable annoyance from the irregular manner in which the plague regulations are enforced. There is no uniformity even in the same Presidency and travellers are subject to all sorts of inconveniences from ignorance of the varying regulations. At Poona the local authorities have been acting contrary to the recent pronouncement of the Government of India concerning the abolition of passes and detention camps, and besides enforcing passes have been offensively huddling together different classes of passengers and insisting without discrimination on the disinfection of all clothes and wearing apparel. In Madras the officials have actually prosecuted the Postmaster-General for a purely technical breach of the plague regulations notwithstanding that he had been inoculated and that the offence committed was practically cleared by the fresh regulations which appeared on the day of his prosecution. These are examples of the want of business-like administration which has characterised the plague work from the very beginning. The management is placed in the hands of civilians or military men instead of with medical officers, and the consequence is that these exceptional powers have been exercised in a high-handed and indiscriminate manner.

Dec. 3rd.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Mill-road Infirmary: Opening of a New Operating Theatre.

THE new operating theatre at the Mill-road Infirmary was formally opened last week in the presence of a large gathering of guardians and members of the medical profession. The theatre is situated in the upper storey of the building and is constructed upon highly approved scientific principles. To the right is the anæsthetic room whence the patient will be wheeled on an ambulance into the operating room. The theatre is well lighted by a large roof, the light facing south and west. The walls are lined with white glazed tiles and the floor is of marble, sloping to a sink for flushing purposes. Needless to say that artificial lighting is by means of electricity, the current of which is also utilised for medical and surgical purposes. All the instruments for use in operations will be sterilised and the dressings before being applied will also be sterilised by drying heat at a temperature of 220° F. Injectors for the supply of absolutely sterile water are provided and all the wash-basins are fitted with foot-pedals, thus obviating the necessity of touching the taps with the hand. The instruments are kept on glass shelves in a dust-proof case to ensure absolute cleanliness and to carry out the aseptic system of surgery. An average of 250 major operations are performed in the infirmary annually. After the inspection the company sat down to luncheon at the invitation of Dr. N. Raw, the medical superintendent. Professor Paterson of University College, who was one of the guests, in proposing the toast of "The West Derby Board of Guardians" complimented the board on the excellent work they were carrying out in the administration of the Poor-law and in their treatment of the 850 sick poor in the Mill-road institution in particular. Alderman Houlding (the late Lord Mayor of Liverpool) and Mr. Mitchell Banks also spoke in complimentary terms of the admirable arrangements made by the West Derby guardians for the comfort and treatment of the sick poor of their union.

Medical Faculty of University College, Liverpool.

The biennial dinner of the Medical Faculty of University College will be held on Jan. 28th, 1899. Professor A. M. Paterson, the Dean of the Medical Faculty, is particularly desirous of making the re-union a most successful one.

Ladies' Charity and Lying-in Hospital: the Proposed Admission of Unmarried Females.

I understand that summonses have been issued for a general meeting of the subscribers to the Ladies' Charity and Lying-in Hospital which has been fixed for an early date, when the question of the admission of unmarried females (about to be confined) to the wards of the lying-in hospital will be discussed in all its bearings. There is every reason to believe that the subject will be treated in a broad and generous spirit and that a long-deferred concession in the case of first confinements is within measurable distance of realisation.

Centenary of the Liverpool Athenæum.

The centenary of the Liverpool Athenæum was celebrated on Dec. 19th under auspicious circumstances. The programme of the proceedings included an address by the Lord Bishop of London and a reception afterwards in St. George's Hall. The Athenæum owes its foundation to the late Dr. James Currie, the biographer of Robert Burns, the late Dr. Rutter, Mr. Roscoe, and a few other prominent citizens of Liverpool, to whom a graceful tribute of admiration was paid by Mr. Alfred Booth, the President, in his introductory remarks relating to the history of the institution. The Athenæum contains a well-stored library in which are to be found many rare and valuable works. It is situated in a central part of the city in Church-street and numbers 500 members, largely recruited from the cream of the mercantile and professional classes.

Dec. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

"Glasgow Medical Pioneers."

AN address on this subject to the Anderson's College Medico-Chirurgical Society was delivered on Dec. 17th by Dr. Erskine, honorary president of the society. The lecturer gave a history of the leading local medical authorities since the institution of the Faculty of Physicians and Surgeons at the end of the sixteenth century. In connexion with this event there was necessarily special reference made to Maister Peter Lowe who was in his day physician to Henry IV. of Navarre and to Prince Henry, son of James I., and to whom the foundation of the Faculty is due. The work of Cullen when professor of medicine in the university and of John Burns, the first professor of surgery, was also discussed and allusion was made to the special local associations of the brothers William and John Hunter. Among other interesting particulars in connexion with the Royal Infirmary note was taken of the work of Dr. Robert Perry as one of the first to establish an essential distinction between typhus and typhoid fever. The same institution could also claim the establishment by Lord Lister of the antiseptic treatment of wounds and more recently the surgical triumphs of Dr. Macewen. Professor Moses Buchanan and his son, the present professor of clinical surgery, and Professor Allen Thomson were among others on the roll of fame, whilst the lecture was brought up to date by a description of the valuable sanitary work performed by Sir William Gairdner and Dr. J. B. Russell. The address was illustrated by lantern pictures, and was much appreciated by the audience.

University of Glasgow.

The special committee appointed to consider the development and extension of the medical school has proposed a scheme for the provision of a pharmacological laboratory and the proposal has received the approval of the University

Court. It has also been decided to permit women to attend post-graduate classes in the medical faculty. Mr. D. C. M'Vail, M.B. Glasg., has been appointed to represent the court on the board of managers of the Glasgow Samaritan Hospital. The court has also approved of the nomination by the Senate of Mr. Hugh Galt, M.B., C.M. Glasg., to be a research fellow in the University.

Glasgow Sanitary Department.

The recommendation of the health committee that Dr. A. K. Chalmers shall succeed Dr. J. B. Russell as medical officer of health and that an assistant medical officer shall be appointed has been approved by the town council.

Presentation to Mr. John Burns, Glasgow.

A long record of honest and unassuming work was recognised yesterday by the presentation to Mr. John Burns of his portrait, painted in oils by Mr. John P. Downie. Mr. Burns has for nearly sixty years been in practice in the East-end of Glasgow, and for that, as well as for other reasons, is one of our best known local worthies. The presentation was made on behalf of the subscribers by Sir William Gairdner who referred in eulogistic terms to the personal and professional merits of Mr. Burns and emphasised the value of his work and influence. In reply Mr. Burns acknowledged in feeling terms the kindly recognition accorded to him and related a number of interesting particulars of his Glasgow memories and associations. In the evening he was entertained to dinner at the Windsor Hotel. The portrait which is of life-size is to be placed in the custody of the Corporation and is to be exhibited in the People's Palace.

Typhoid Fever in Aberdeen.

There has just occurred in Aberdeen another outbreak of typhoid fever—19 cases with 2 deaths—which like the last has been traced to infection by milk.

University of Aberdeen.

The portrait of the Marquis of Huntly, Lord Rector of the University, painted by Mr. J. Coutts Michie, A.R.S.A., has been placed in the picture gallery at Marischal College. The portrait is the gift of the artist.

Aberdeen Medico-Chirurgical Society.

The annual dinner of this body was held in the society's hall, King-street, Aberdeen, on Dec. 16th. Dr. Thomas Milne of Ellon, president, occupied the chair, and there was a large attendance of members and guests. Professor Stephenson (Aberdeen University) was croupier. The President gave the toast of "The Medico-Chirurgical Society." Dr. Ashley W. Mackintosh replied for the "Navy, Army, and Reserve Forces," and Professor Findlay for "The University and Medical School." Professor Stephenson replied to the toast of "The Medical Charities," and Dr. Angus Fraser gave that of "The Founders of the Society." Dr. Edmond proposed "The Guests," coupled with the name of Dr. Wilson of Huntly. The speeches were happily interspersed with amusing anecdotes.

Dec. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Regius Professorship of Physic, Dublin University.

DR. JAMES LITTLE has been elected Regius Professor of Physic of the University of Dublin in the room of Sir John Banks, resigned.

An Irish Patent Medicine Bankruptcy Case.

Of all the secret and patent medicines sold in Ireland the one most widely advertised of late years has been that known as "Trench's Remedy." It was a nostrum recommended for the cure of epilepsy, and was generally supposed by medical men to be a strong solution of the bromides. There is no doubt that the medicine was largely given away for purposes which seemed entirely charitable. In the Bankruptcy Court, on Dec. 9th, the case of J. Townsend Trench, a bankrupt, was heard by Judge Boyd. Mr. John Bernard, pharmaceutical chemist, of Clare-street, deposed that he had an arrangement for a number of years to supply the bankrupt with drugs and that he, witness, looked for a profit of from 10 to 15 per cent. It was proposed in last December that as Mr. Trench could not meet his liabilities a company should be formed and that the amount of the debts—viz., £9500—should be the amount of the purchase money. Mr. Trench is a man of considerable private property.

The Belfast Water-supply.

The Belfast Water Commissioners are about to promote in Parliament a Bill to authorise them among other things to construct certain works for the improvement and extension of their water-supply, and for this purpose to acquire and purchase large tracts of land in the neighbourhood of Carrickfergus and Stoneyford, at their catchment areas. As a result the farmers who will be affected by the proposed Bill are arranging to oppose it and an important meeting of those affected by this compulsory purchase of their homesteads was held on Dec. 17th in Carrickfergus at which those present pledged themselves to oppose in Parliament the proposed scheme of the Belfast Water Commissioners, a plan which they characterise as "iniquitous and most unjust as it is based on misleading and erroneous statements regarding the pollution of their water-supply." It is reported that those living in the Stoneyford catchment area will also join in this opposition. I think the Water Commissioners under very difficult circumstances are doing their best. They have been forced by public opinion to take the utmost precautions to keep their present supplies free from the risk of any pollution. This can only be done by safeguarding the catchment areas, and now when they are presenting a Bill for this purpose the farmers resident in the area (and there is nothing that an Irish farmer resents so much as forcible eviction even with compensation) threaten them with what in law will be a very awkward opposition to their measure. The absolute necessity for the Water Commissioners to take the proposed precautions at Stoneyford is still more strengthened by the published report that at the last meeting of the Lisburn Board of Guardians, Dr. Alexander, medical officer of Knocknadona dispensary district, reported that a case of typhoid fever recently occurred in a house near a river flowing into the Stoneyford reservoir and that the excreta from the patient were thrown on the manure heap without being disinfected. Dr. Alexander very wisely recommended that this manure should be removed by the Belfast Water Commissioners out of their catchment area, as being liable under certain conditions to contaminate the water. The guardians ordered that a copy of this report should be sent to the Belfast Water Commissioners.

The Belfast District Lunatic Asylum.

A deputation from the governors of the Belfast Lunatic Asylum met the finance committee of the city corporation on Dec. 19th to consider some important monetary matters. It was explained by the governors that the Board of Control of Asylums in Dublin made a demand from the corporation of £400, amount of fees due to the architects and surveyor in respect of the new Purdysburn Asylum. The finance committee of the corporation replied that they considered it strange that the Board of Control did not think it necessary to place before the corporation any details regarding the plans which had been prepared and the final amounts which they would be required to meet. In the absence of any statement regarding these they decided not to make an immediate advance of money, but to ask the Board of Control for further information on the points mentioned.

Dec. 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Medical Men Prosecuted by a Confrère.

DURING the course of a trial held in September it came out in evidence that Dr. Choisnet of La Flèche had through negligence given the accused woman a certificate to say that she had not been recently delivered. The other medical men in La Flèche (five in number) accordingly wrote to Dr. Choisnet a letter which they also published saying that they considered him as no longer belonging to the medical body and demanding the erasure of his name from the list of those entitled to serve on public bodies. Dr. Choisnet prosecuted his five colleagues before the Correctional

Tribunal of La Flèche and eventually they were condemned to pay a fine of 100 fr. respectively and to pay collectively 1000 fr. damages.

A Medical Trial.

A trial is about to be heard in which the facts possibly are not new but, it is believed, are to be submitted to a legal tribunal for the first time. Two years ago a patient was attended in her confinement by her usual medical attendant, but not recovering in a normal way she underwent an operation performed by a young surgeon who had been a pupil of Péan. The operation seemed to do no good and the patient still kept her bed. Despite the entreaties of the surgeon that she should have a second operation, she would never consent and fifteen months after the first operation she went into the Hospital of St. Louis where a laparotomy was performed by Dr. Marchand. In the course of this operation a Hegar's dilator (bougie) made of metal was discovered which had been overlooked by the first operator. Questioned on the matter the young surgeon admitted the facts and added that that was just the reason why he had urged the second operation—namely, to get rid of the dilator. The patient who is now quite well has commenced proceedings against her medical attendants for malpraxis.

A Touching Ceremony at the Hospital of St. Louis.

The inauguration of a memorial erected by public subscription to the memory of Dr. Henri Feulard took place recently in the library of St. Louis Hospital. The pedestal, carved by the sculptor Maurice Bouval, is very simple and dignified. The statue, cast and bronzed (*patiné*) by Siot-Decauville, stands under a canopy of *rouge antique* marble which was designed by the architect Michelieu. Sundry allocutions were given in the presence of the subscribers, friends, and colleagues of Dr. Feulard. The ceremony was a really heartfelt manifestation of the respect in which Dr. Feulard was held. It will be remembered that he perished owing to his devoted conduct at the lamentable fire at the Charity Bazaar last year.

Mushroom Juice as an Antitoxin against Serpent Venom.

M. Phisalix gave the result of some experiments which he had made on the use of mushroom juice as an antitoxin against serpent venom at the meeting of the Academy of Sciences held on Dec. 12th. He first of all pointed out that tyrosin, which is the chemical nucleus of all albuminous bodies, when extracted from the juices of serpents, is an immense power against their venom. He said that he had been led to seek whether the juice of mushrooms which contains plenty of tyrosin and some ferments as well would not possess the same properties. He made various experiments and found out that all kinds of mushrooms possess a substance which acts as an antitoxin against serpent venom. If, for instance, the juice of the ordinary hot-bed mushroom is extracted by pressure or by maceration in water and inoculated into a guinea pig the animal is rendered absolutely refractory to serpent venom. Unfortunately, however, the inoculation seems to possess toxic properties which vary in degree according to the size of the dose. In the rabbit, for instance, the injection of 25 c.cm. of mushroom juice is fatal, the animal dying from intervascular coagulation. With a view to avoiding these results M. Phisalix tried filtering and boiling the juice, but all the same the toxic properties remained although they were much diminished.

Fat in the Horny Layer of the Skin.

At the meeting of the Academy of Sciences held on Dec. 5th M. Ranvier put forward the idea that the horny layer of the skin is infiltrated with fat. This epidermal fat is of a yellow colour and solid at ordinary temperatures. It has the consistency of wax and melts at a temperature of about 36° C., just as beeswax does, with which it presents a very close analogy, an analogy all the more interesting because beeswax, like the similar substance found in mammals, is a secretion of the skin. The cells of the horny layer of the epidermis, far from being dried up, as is generally taught, are really hollow cells altered in shape by reciprocal pressure. Their walls are formed by a resisting substance and the contents are waxy. Owing to the mode of distribution of the epidermic wax in the horny layer of the skin it is obvious that the entire body is covered with a kind of varnish, and thus it is protected against both mechanical injuries and chemical injuries.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Excessive Cold.

THE steady fall in the temperature is felt severely throughout the peninsula. In northern Italy, particularly on the Adriatic side, Rovigo, for example, in the twenty-four hours between 8 A.M. of Dec. 15th and 8 A.M. of Dec. 16th registered 3° C. below zero; Mantua, 2°; Ferrara, 1·5°; Ravenna, 1·4°; and Belluno, 0·9°. In Central Italy Florence registered a minimum of 1·1° C. and a maximum of 7·5°. But it is in the southern provinces that the cold, which between Dec. 16th and 17th increased so suddenly, has numbered most victims. "Miseria"—that comprehensive word which includes starvation, semi-nudity, homelessness, and despair—is rampant in the ex-kingdom of the Two Sicilies and there, of course, the fall of temperature finds multitudes in town and country with a resisting power quite unequal to the visitation. In Naples three deaths are already announced as having occurred in the streets on Dec. 17th and many more may be expected according as the reports come in from the police offices and hospitals. Italians, as a rule, stand extremes of temperature wonderfully well—cold particularly. Of all the contingents of the Emperor Napoleon's Grande Armée in the disastrous retreat from Moscow in 1813 Murat's 10,000 Neapolitans suffered least from the frost-bite or from the numbness and the torpor which, in the case of thousands of their non-Italian comrades, lapsed into the sleep that knows no waking. The fact gives a measure of the "miseria" which has prepared so many victims in the Neapolitan districts within the last forty-eight hours. The season, as a whole, has commenced badly for the Mediterranean littoral and that means, in Italy *par excellence*, lack of custom for the many interests which profit by the moneyed visitor. Not only on the Riviera Levante as well as on the Riviera Ponente are the hotels all but empty, but in such favourite resorts as Florence, Rome herself, and Naples a similar tale is told. Impecuniosity and pauperism are intensified and with them the "miseria" that decimates the lower strata of society. The prevalence of abnormal cold and the menace of a severe winter will deter yet more the hitherto tardy tourist- or travelling-world and so the situation, financial and social, must become aggravated. Nowhere more than in the "genial South," particularly in those sun-traps which nestle along the Neapolitan Riviera, will it be said with the poignancy of truth, "Sadly falls our Christmas Eve!"

Tuberculosis of the Thoracic Duct.

At the last meeting of the Reale Accademia di Medicina of Turin Dr. Pio Foà, Professor of Pathological Anatomy in the University, drew attention to tuberculosis of the thoracic duct. Whence the tuberculosis had its point of departure was not, he said, very clear. Some of the abdominal ganglia around the cœliac trunk he found to be caseous. The tuberculosis seems to have gained access to the cisterna chyli (reservoir of Pecquet) and to all the thoracic duct which was, nevertheless, quite permeable. The duct in some tracts was extremely dilated and had its parietes greatly thickened and in the light showed an eruption of nodules large and small. There was further a miliary (granular) tuberculosis confined to the two lungs, but as the intromission of bacilli into the blood from the thoracic duct was probably affected "interpolatamente" (at intervals) so there followed an eruption of nodules in the lung at different stages of development. There were, in fact, chronic granulations (*miliari cronici*) and recent granulations, as well as many sub-granulations of quite recent standing. The patient died in consequence of profuse and uncontrollable epistaxis.

Dec. 19th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Influence of X Rays in Lupus.

AT a recent meeting of the Vienna Medical Society Dr. Schiff showed a case of lupus erythematodes in which the x rays had been made use of. At the beginning of the treatment the disease existed over the whole face. The rays were

employed for two months and the effect is that the infiltration of the skin has entirely disappeared; the surface of the skin is smooth without elevations and the disease is now limited to some discrete isolated patches. In the treatment of lupus vulgaris by means of the x rays Dr. Schiff has met with very gratifying results which have also been obtained by Dr. Finsen of Copenhagen under a different system—viz., by the use of concentrated sunlight or concentrated electric light. This latter method, however, is only applicable to small patches of the disease in question and for extensive surfaces the x rays are to be preferred. Dr. Spiegler, who had seen Dr. Finsen's method put in practice, said that it can only be recommended in cases where the disease is confined to small areas; it never causes the lesions of the skin which sometimes follow exposure to x rays. Dr. Schiff, in his reply, said that the injury to the skin by the x rays may be avoided if the intensity of the radiation does not exceed a certain amount and if the treatment is discontinued on the appearance of the slightest hyperæmia. Professor Kaposi remarked that it was interesting to observe that pathological processes histologically so different as lupus vulgaris and lupus erythematodes both improve under the same treatment. The effect depends on the circumstance that there occurs first an active and then a passive hyperæmia—a paresis of the superior and the inferior vessels of the skin respectively. It is also possible that a chemical action may be exerted directly on the diseased structures, causing them to undergo retrogression.

Heroin.

Dr. Weiss has published in the *Heilkunde* an account of his experience with the new remedy heroin. He has found it very beneficial in chronic bronchitis attended by swelling of the mucous membrane, for after a dose of 5 milligrammes (about $\frac{1}{14}$ gr.) the cough decreases and the pain in the chest disappears. It gave relief in cases of chronic bronchitis where codein had no effect. In phthisis it is an excellent substitute for morphia; 5 milligrammes given three times a day relieve the cough and the pain in the chest.

Dec. 20th.

Obituary.

CHARLES JOHN HARE, M.D. CANTAB., F.R.C.P. LOND.

ONE of the old school of practitioners has passed away in the person of Dr. Charles Hare. He died on Dec. 15th at his residence, Berkeley House, Manchester-square, from carcinoma of the œsophagus, at the ripe age of eighty-one years. Charles John Hare was the son of Samuel Hare, F.R.C.S., who was for many years a surgical practitioner at Leeds and who died in 1867. Dr. Hare received his medical education at the University of Cambridge (where he graduated as M.B. in 1841, proceeding to M.D. in 1847), at University College, London, and at Paris. In 1850 he took the Membership of the Royal College of Physicians of London, being elected Fellow in 1859.

Although commencing his medical studies at Cambridge Dr. Hare took the (in those days) very unusual step of migrating to University College, London, where he continued the study of medicine, and he also visited Paris with the same object. His connexion with University College Hospital dates from the year 1850 when, along with the late Sir William Jenner, he was elected assistant physician. In 1860 he was allotted beds for in-patients to the number of four, being also appointed physician, but he does not seem to have had charge of a ward until the year 1862 when he was given the charge of the in-patients who had been previously under the care of Dr. Garrod. In 1863 he was appointed Professor of Clinical Medicine and in the following year, 1864, attended on his death-bed a certain Mr. Edward Yates of Etchingham, Surrey. We mention this fact because it has an important bearing upon the fortunes of the hospital. Dr. Hare was Mr. Yates's executor and very intimate friend and it was in great measure owing to this latter fact that Mr. Yates bequeathed £46,000 to the hospital. The income of one-half of this was applied to the general purposes of the hospital and the other half was to form a Samaritan Fund. This fund was duly started in 1867 and out of it patients are sent to convalescent homes, their families are supported while the bread-winner is in the hospital, surgical appliances are procured, and dinners are provided for such patients as need them more than medicine. In this year Dr. Hare found it necessary to terminate his connexion with the hospital which he had served for seventeen years—that is, so far as active work in the wards was concerned—for he never lost his interest in the institution and was a member of the hospital committee from 1861 until almost the day of his death. Upon his resignation of the physicianship and professorship both the council of the college and the committee of the hospital passed cordial votes of thanks, the latter specially referring to the services rendered by him in connexion with the Yates bequest.

In 1863 he married Catherine, the youngest daughter of Mr. E. Westhead, of Croston Tower, Cheshire. Dr. Hare was a man about whom not much was known outside the ranks of his immediate friends. He was very kindly, well read, and preserved to the last the dignified courtesy of the old school, together with the professional costume of the early "fifties." He had indomitable pluck and although months before his death he knew the nature of his complaint his spirits and courage never deserted him. One of his friends met him at the University College Hospital dinner on the opening of the present session to whom, in answer to some inquiry concerning his health, Dr. Hare said: "Well, I oughtn't to be here at all. You see I've got cancer of the œsophagus and I can hardly swallow anything. But I know I can't last long, so I want to go on as long as I can."

Dr. Hare, as is not unusual in men who have reached an advanced age, was somewhat a *laudator temporis acti*. Many will remember his trenchant little *brochure* entitled "Good Remedies out of Fashion," in which he strongly urged the claims of emetics, bleeding, and free purgation. No doubt these therapeutic measures have been abused in the past, but equally nowadays they are too much neglected. Although he never attained a very prominent position he was a most admirable clinical teacher, especially upon the somewhat difficult subject of abdominal diseases. He was uniformly kindly and courteous and always ready to help not only with advice but with more material aid those who were in trouble.

A friend of the late Dr. Hare and a representative member of the profession sends us the following words of appreciation: "Dr. Charles Hare had fully completed his years which were full of honour and of happiness—the happiness which consists in having lived usefully, methodically, and genially, with an eye to the happiness of others as well as his own. In many respects Dr. Hare was a model of what a physician should be. He had an abundant fund of common-sense and a very sound knowledge of his profession and of different systems of medical practice, his life having been long enough to see in full force the old treatment and the new and his mind being broad enough to accept what was true in both. But his culture was not confined to medical subjects. His knowledge of men and books and things was wide. He travelled much and with much method and observation. One of the oldest and one of the most highly esteemed of Cambridge medical graduates, he was much regarded by his university and especially by medical graduates. But he was bound by no academic limits and he took a large interest in the profession and in its prosperity, as well as in all public and political questions, expressing himself with the combined frankness and urbanity which are the great notes of true culture and which secure the respect of all sorts and conditions of men. But what most endeared Dr. Hare to those who knew him and gave additional force to the grief felt at the announcement of his death was his unfailing cheerfulness. It was an inspiration and a pleasure to meet him. In all men this is a precious gift, in the physician it is invaluable. In Dr. Hare it was always in evidence, even in late years, when symptoms of physical ill which might have disturbed the serenity of some men asserted themselves in his fine constitution. I have still before me the New Year's card for 1898 which he sent me. It may well serve for any successive year which the youngest member of the profession may see.

'1898.

'Take thy New Year with thankfulness—but is it not well, starting afresh with hope and trust, to commence a new year every morning, determining to leave, as far as may be, all worries (which "have killed their thousands") and all troubles and vexations to the last year's account—closed the night before?'

The sentiment was at once the expression and the secret of Dr. Hare's bright life; it was the practice of this happy philosophy that made him useful to his fellow-men."

CHARLES EGERTON FITZ-GERALD, M.D. ST. AND., M.R.C.S. ENG.

By the death of Dr. Fitz-Gerald who passed away on Dec. 11th Folkestone loses her oldest and most prominent practitioner. Dr. Fitz-Gerald was born in 1830 and was educated up to the age of fifteen years at a school in Brighton. On leaving school he was apprenticed to a surgeon at Bicester where he remained until he entered as a student at St. Bartholomew's Hospital. He became M.R.C.S. in 1856 and in the same year accompanied the present Marquis of Dufferin on his cruise to the north, the journey which forms the basis of that delightful book, "Letters from High Latitudes." On his return he commenced practice in Folkestone as a partner of the late Dr. Eastes and in 1858 he married. After having been in partnership a few years he commenced practice by himself under a friendly agreement with Dr. Eastes. In 1862 he graduated as M.D. at the University of St. Andrews. He was extremely popular, and in addition to his more strictly professional studies took a great interest in natural history, being the founder and for twenty years president of the Folkestone Natural History Society. The subject of the prevention of tuberculosis interested him deeply and in February, 1898, he read a paper on the subject dealing mainly with the precautions adopted in New York. He was a frequent contributor to our columns and the last paper from his pen which we published appeared so recently as Oct. 8th, 1898. He was buried on Dec. 14th at the Folkestone Cemetery, the first part of the service having been said at Christ Church. He was unceasing in his efforts to promote the well-being of Folkestone and contributed greatly towards its popularity as a health resort. He was an earnest and consistent Churchman, but all the same numbered among his friends many of other denominations and those who differed widely from him in matters of religious belief. As to the estimation in which he was held by his fellow townsmen we cannot do better than quote the closing lines of a leading article in the *Folkestone Herald* of Dec. 17th: "He has left behind the fragrance of a blameless life, the incentive to noble exertion, and above all the sentiments of gratitude which the inhabitants of a town must ever feel for work of such a high character as that which has been done for them by the distinguished physician whose death we are all deploring."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Jodko-Narkiewicz, one of the most eminent of Russian ophthalmic surgeons. He studied in Dorpat and Warsaw and subsequently held official posts in the latter university. He was sixty-eight years of age.—Dr. Caselli, Professor of Clinical Surgery in the Genoa Medical School.—Dr. Junge, formerly Professor of Ophthalmology in the Military Medical Academy, St. Petersburg.

Medical News.

UNIVERSITY OF OXFORD.—At the first M.B. examination the following candidates were successful in the subjects indicated:—

Anatomy and Physiology.—C. L. Coode, Hertford; V. S. Hodson, Marcon's Hall; G. A. Jones, Magdalen; and A. E. A. Loosely, Pembroke.

Organic Chemistry.—P. E. H. Adams, Exeter; C. V. Aitchison, Balliol; L. H. Badcock, Trinity; J. M. Bickerton, Merton; A. W. S. Fisher, New College; A. F. Hertz and F. P. T. Hilliard, Magdalen; V. S. Hodson, Marcon's Hall; F. Howson, non-collegiate; A. C. Inman, Wadham; H. W. Kaye, Magdalen; H. L. Laws, Wadham; H. C. Lecky, Christ Church; R. S. Macgregor, Exeter; C. F. Pinching, St. John's; P. F. Tinne and H. M. Turnbull, Magdalen; A. J. Wigmore, non-collegiate; E. A. G. Wilkinson, University; and H. M. M. Woodward, Keble.

Final M.B., B.Ch.—O. Eichholz, Magdalen; F. E. Fremantle, Balliol; R. Hopkinson, Trinity; R. O. Moon, New; R. W. Payne, Christ Church; E. H. Scholefield, New; E. W. Walker, Christ Church; S. Welby, Trinity.

Diploma in Public Health.—A. L. Ormerod, New; C. A. Reynolds, Keble; E. A. Saunders, St. John's.

FOREIGN UNIVERSITY INTELLIGENCE.—*Baltimore (Johns Hopkins University):* Dr. Simon Flexner has been appointed Professor of Pathological Anatomy.—*Budapest:* Dr. Ludwig Huttyasi has been recognised as *privat-docent* of Odontology, Dr. Karl Morelli as *privat-docent* of Laryngology, and Dr. Bernhard as *privat-docent* of Pathological Chemistry.—*Buenos Ayres:* Dr. Otto Voges, Assistant in the Berlin Institute for Infectious Diseases, has been offered the appointment of Professor of Hygiene and Director of the State Bacteriological Laboratory.—*Geneva:* Dr. de Marignac has been appointed Professor of Hygiene.—*Heidelberg:* Dr. C. Jung has been appointed Director of the Odontological Institute.—*Moscow:* Dr. A. V. Martinoff has been recognised as *privat-docent* of Surgery.—*Naples:* Dr. Maglieri has been recognised as *privat-docent* of Hygiene.—*Pavia:* Dr. F. Villa has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Turin:* Dr. Fusari of Modena has been appointed to the chair of Anatomy in succession to the late Dr. Giacomini.—*Vienna:* Dr. Philipp Knoll of the German University of Prague has been appointed to the chair of General and Experimental Pathology in succession to the late Professor von Stricker. Dr. Paltauf has been appointed Professor of General Pathology and Pathological Histology.

CARDIFF BOARD OF GUARDIANS.—At the meeting of the Cardiff Board of Guardians held on Dec. 10th a letter was received from Dr. J. J. Buist resigning his seat as a guardian. The chairman expressed his regret that Dr. Buist had found it necessary to leave the board.

DIPHTHERIA IN SWANSEA.—The medical officer of health of Swansea (Mr. E. Davies) has ordered all the schools in the borough of Swansea to be closed for the Christmas holidays a week earlier than was intended owing to the continued prevalence of diphtheria.

RAILWAY ACCIDENT TO A MEDICAL MAN.—On Dec. 15th Mr. A. Jeffreys, assistant to Dr. R. McGhie, of Abercanaid, Glamorganshire, by mistake got out of a train on the side opposite the platform at Abercynon Station, and falling on the line was run over by a mineral train, with the result that both arms were practically severed from the body. After receiving medical attention Mr. Jeffreys was conveyed to the Cardiff Infirmary.

CHARGE OF PERJURY AGAINST A SURGEON.—Mr. James Jerome Mackay, who was charged before Mr. Plowden at the South-Western police-court on Wednesday last with committing wilful and corrupt perjury at an inquest held by Mr. A. Braxton Hicks, coroner for the south-western district, on the body of a child named Ernest Mackenzie, was discharged, the magistrate remarking that in his opinion the case was simply one of difference of opinion among medical men and no assignment of perjury could be founded upon an expression of opinion.

DIPHTHERIA IN LONDON.—In the two periods, each of four weeks, ended respectively on Nov. 5th and Dec. 3rd, the amount of diphtheria in London was almost identical. Not so, however, either the deaths or the case-rate of mortality. In the earlier period all districts of London were invaded save one, but two escaped invasion in the later period. In the earlier there were seven districts each with 50 notifications and upwards, with an aggregate of 507, and other seven districts with only 10 in all; whilst in the later period eight districts had each upwards of 50 notifications and a total of 517, other six sanitary areas having only 17 in all amongst them. Despite these variations there was a difference of 3 only in the sum total of the notifications in London, the figures for the periods being 1087 and 1084 respectively, the latter yielding a weekly average of 271 cases. As regards deaths, the 145 deaths, with an average of 36 weekly, and a case-rate of 13·3 per cent. of the earlier period gave place to 156 deaths, or 39 weekly, and a case rate of 14·4 per cent. The minimum and maximum weekly deaths numbered 31 and 43, but the corrected decennial average for the corresponding weeks of the years 1888-97 was in no instance exceeded. The several weeks of this later period, in fact, yielded totals which respectively were 22, 5, 16, and 7 below the corrected average. In the outer circle, the 51 deaths in the early period gave place to 65 (11, 21, 16, and 17), of which 22 belonged to West Ham registration district.

MEDICAL MAGISTRATES.—Mr. Thomas S. Rowe, M.D. Edin., of Margate, has been appointed a magistrate for the Cinque Ports.—Mr. William Brown Holderness, M.R.C.S. Eng., L.S.A., of Windsor, has been appointed a magistrate for that borough.—Mr. Charles W. Wilson, M.B. Durh., M.R.C.S. Eng., has been appointed a magistrate for the borough of Bridport.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—At a special meeting of the governors held on Dec. 15th for the purpose of electing an honorary surgeon in the place of Dr. Charles Booth, resigned, Mr. R. T. Gratton who presided remarked that Dr. Booth had served in that capacity for thirty-five years, rendering during that period most valuable services to the welfare of the institution and it was satisfactory to know that they would still retain him as an honorary consulting surgeon. Dr. Booth had declined to accept any personal gift in token of their appreciation of his services but had consented to sit for his portrait in oils, which is to adorn the walls of the hospital board-room.

APOTHECARIES' HALL OF IRELAND.—At a meeting of the Governor and Court of the Apothecaries' Hall of Ireland the following gentlemen were appointed to conduct the examination in medicine, surgery, and midwifery for the year 1899:—Chemistry and Physics: Professor W. N. Hartley, F.R.S., and Mr. C. R. C. Tichborne. Pharmacy: Mr. W. V. Furlong and Mr. G. A. Stritch. Anatomy: Dr. J. Campbell and Mr. P. J. Fagan. Biology: Dr. F. Adye-Curran and Dr. J. A. Johns. Materia Medica: Mr. John Evans and Mr. S. M. Thompson. Physiology: Dr. C. M. O'Brien and Dr. G. B. White. Hygiene: Sir Charles Cameron and Dr. J. M. Day. Medical Jurisprudence: Mr. H. A. Auchinleck and Mr. J. E. Kenny. Pathology: Dr. J. Knott and Dr. C. M. O'Brien. Midwifery and Gynæcology: Dr. T. More Madden and Dr. R. D. Purefoy. Ophthalmology: Mr. F. Odevaine and Dr. R. J. Montgomery. Surgery (appointed by the General Medical Council): Mr. H. G. Howse and Dr. H. A. Thomson. Medicine: Dr. W. E. Ashley Cummins and Dr. M. McHugh.

PRESENTATIONS TO MEDICAL MEN.—Mr. Arthur Nathaniel Davis, L.R.C.P., L.R.C.S. Edin., the late medical superintendent of the Plymouth Borough Asylum, Blackadown, who will shortly enter upon his duties as medical superintendent of the Devon County Asylum, was last week entertained to dinner at the Royal Hotel, Plymouth, by his municipal colleagues, on whose behalf he was presented by the Town Clerk (Mr. I. H. Ellis) with a case of silver salt-cellars as a token of esteem.—Mr. W. J. Howarth, M.D., D.P.H. Vict., Medical Officer of Health for the borough of Bury, Lancashire, has been the recipient of a silver inkstand from the Bury sanitary inspectors.—On his retirement from office as honorary physician to the Bradford Royal Infirmary Dr. H. C. Major was recently entertained at dinner by the honorary medical and surgical staff and presented with an illuminated address and an album containing the photographs of the staff. Previously Dr. Major had been the recipient of an illuminated address from the board of management of the infirmary and of an aneroid barometer from the resident staff.

LEEDS SCHOOL OF MEDICINE.—The twentieth annual dinner of past and present students was held on Dec. 8th at Powolny's Restaurant. The chair was occupied by Dr. James Braithwaite, honorary obstetric physician to the Leeds General Infirmary, the vice-chairmen being Dr. J. Dobson and Mr. Edmund Robinson. A large number of the staff of the medical school and infirmary were present, including Mr. Littlewood, Mr. W. H. Brown, Dr. T. W. Griffith, Dr. E. F. Trevelyan, and Mr. Moynihan. About 100 gentlemen sat down to dinner. After the loyal toasts had been duly honoured Mr. Hugh Keeling proposed "The Staff" which was replied to by Dr. Braithwaite and Mr. E. Robinson. Mr. W. H. Brown, in the absence of Dr. Barrs, proposed "The Students, Past and Present," which was replied to by Dr. Dobson and Mr. Collinson. The toast of "The Visitors," proposed by Dr. Griffith, was replied to by Mr. Hutton on behalf of Owens College, Manchester, and by Mr. Oursnofski on behalf of University College, Liverpool. Selections of music were played during dinner and songs were contributed during the evening by students both past and present. A most successful evening was brought to a close by the singing of "Auld Lang Syne."

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADAMS, E. W., F.R.C.S. Eng., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed a Medical Officer by the Slough Urban District Council.

BLAKER, PERCY S., M.R.C.S., L.R.C.P. Lond., has been appointed a House Physician for the City of London Hospital for Diseases of the Chest, Victoria-park, E.

BURGESS, R., M.B., C.M. Aberd., has been appointed a certifying Factory Surgeon for the Stanley District, Perthshire, vice W. Peddie.

BURROW, VINCENT, M.B., B.S. Durh., M.R.C.S., L.R.C.P., has been appointed a Medical Officer for the No. 2 Sanitary District of the Aylesbury Union.

CRISP, A., M.R.C.S., has been re-appointed a District Medical Officer by the Smallburgh District Council.

EDMUNDS, F., L.R.C.P. Lond., M.R.C.S., has been appointed an honorary Surgeon for the Chesterfield and North Derbyshire Hospital, vice C. Booth, resigned.

FORSTER, J., M.B., C.M. Glasg., has been appointed a Medical Officer for the Conisbrough Sanitary District of the Doncaster Union.

GOSSAGE, A. M., M.B., B.Ch. Oxon., M.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Physician for the East London Hospital for Children and Dispensary for Women at Shadwell.

HALL, J. FIELD, M.B., M.Ch., has been appointed an Assistant Physician for the Hospital of St. Francis, New Kent-road, London.

HAMILTON, W. C., M.B., C.M. Edin., has been appointed a Certifying Factory Surgeon, Plymouth district, vice W. A. Buchan.

HAY, P. G., M.B., C.M. Aberd., has been re-appointed a Parochial Medical Officer by the Forgue Council.

HILLMAN, G. B., L.S.A., has been appointed a Medical Officer by the Castleford Urban Council, vice E. W. Kemp, resigned.

IRONSIDE, JAMES, M.B., C.M. Aberd., has been re-appointed a Medical Officer for the Parish of Laurencekirk.

JEPHCOTT, C., M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Physician for Guy's Hospital, London, E.C.

KELYNACK, T. N., M.D. Vict., Ch.B., M.R.C.P. Lond., has been re-appointed a Medical Officer for the Manchester Royal Infirmary.

KITCHIN, P. L. S. A., has been appointed a Medical Officer for the Box and Ditteridge Sanitary District of the Chippenham Union.

LAPTHORN, C. A., F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed, *pro tem.*, Medical Officer for the Littlehampton district of the East Preston Union, vice F. C. Bryan, resigned.

LATHAM, A. C., M.A., M.B. Oxon., M.R.C.P., has been appointed Assistant Physician to St. George's Hospital, London.

LAWSON, F. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon for the Darlington Hospital and Dispensary.

MATHEW, G. PORTER, M.A., M.D., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Assistant Surgeon for the Provincial Hospital, Port Elizabeth.

MAY, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Third Sanitary District of the Ware Union.

MELLAND, CHARLES, H., M.B. Lond., M.R.C.S., has been appointed a Resident Medical Officer for the Manchester Royal Infirmary.

MITCHELL, A., M.B., C.M. Edin., has been re-appointed a Medical Officer for the Parish of Old Machar.

RAWES, WILLIAM, M.D., F.R.C.S., has been appointed Medical Superintendent for St. Luke's Hospital, London, E.C.

ROBERTSON, W., M.D. Glasg., D.P.H., has been appointed a Medical Officer and Police Surgeon for the city of Perth.

ROLLESTON, H. D., M.D. Cantab., F.R.C.P., has been appointed Physician to St. George's Hospital, London.

SMITH, S., M.R.C.S., has been appointed a Medical Officer for the West Malvern Sanitary District of the Ledbury Union.

STEVENSON, BRUCE, L.D.S., has been appointed a Clinical Dental Assistant for the Hospital of St. Francis, New Kent-road, London.

STONHAM, H. A., L.R.C.P., M.R.C.S., D.P.H., has been appointed Public Vaccinator for the Stepney Union.

STREETEN, F. E., L.R.C.P. Edin., M.R.C.S., D.P.H., has been re-appointed a Medical Officer by the Old Swindon Urban District Council.

TARGETT, J. H., M.B. Lond., B.S., F.R.C.S., has been appointed an Assistant Obstetric Surgeon for Guy's Hospital, London.

TAYLOR, HUGH, L.R.C.P. Edin., M.R.C.S., has been re-appointed a Medical Officer of Health by the Smallburgh Rural District Council.

TURNER, JOHN ANDREW, M.B., D.P.H., has been appointed County Medical Officer of Health for Hertfordshire.

WILLANS, W. B., L.R.C.P. Edin., M.R.C.S., has been re-appointed a Medical Officer by the Ware Board of Guardians.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BURY INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, residence and attendance.

CITY ASYLUM, Birmingham.—Junior Assistant Medical Officer for one year, unmarried. Salary £100 a year, with board, lodging, &c.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c. Also Second House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for twelve months. Salary £40 per annum, with board, residence, and washing.

FINSBURY DISPENSARY, Brewer-street, Goswell-road, London.—Resident Medical Officer for one year. Salary £100 per annum, with a furnished residence in the institution, attendance, coals, and gas.

GENERAL HOSPITAL, Nottingham.—House Physician for two years. Salary £100, rising £10 a year to £120.

GOVAN DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary £100 a year, with board and residence. Applications to the Medical Superintendent, Hawkhead Asylum, Paisley.

GUEST HOSPITAL, Dudley.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with residence, board, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £80 per annum, with board and lodging in the hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

KENSINGTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £125 per annum, with furnished apartments, coals, gas, and attendance. Applications to the Honorary Secretary, 21, Lower Phillimore-place, Kensington, W.

LIVERPOOL NORTHERN HOSPITAL.—Owing to unforeseen circumstances the appointment of Assistant House Surgeon as advertised has been postponed for two months.

LONDON FEVER HOTPITAL, Islington.—Assistant Physician.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—House Surgeon for the Male Hospital. Salary £50 per annum with board, lodging, and washing. Applications to the Secretary at Harrow-road.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Assistant to House Surgeon for six months. Board, lodging, and washing provided. Also Dental Surgeon.

NORTHERN DIVISION OF SOUTH UIST PARISH.—Medical Officer and Public Vaccinator. Salary £77 10s., and private practice. Apply to Mr. T. Wilson, Solicitor, Lochmaddy, Clerk.

ROYAL BUCKINGHAMSHIRE HOSPITAL, Aylesbury.—Resident Surgeon and Apothecary, unmarried. Salary £80 the first year, with an advance of £10 per annum until it amounts to £100, with board, lodging, washing, coals, and lights, and furnished apartments.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Junior House Surgeon. Salary £63 per annum.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon. Salary at the rate of £60 per annum, with board, lodging, and washing.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant, for six months. Board and residence provided.

ST. THOMAS'S HOSPITAL, London.—Assistant Surgeon.

SUNDERLAND INFIRMARY.—House Physician. Salary £80, rising £10 annually to £100, with board and residence.

UNIVERSITY OF ST. ANDREWS.—An additional Examiner for three years.

WESTERN OPHTHALMIC HOSPITAL, Marylebone-road, London.—Assistant Surgeon.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Medical Registrar, for twelve months. Salary £50 per annum.

WORCESTER COUNTY AND CITY ASYLUM, Powick.—Assistant Medical Officer. Salary commencing at £100 a year, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BIDWELL.—On Dec. 17th, at Wimpole-street, Cavendish-square, W., the wife of Leonard A. Bidwell, F.R.C.S., of a daughter.

VERRALL.—On Dec. 17th, at Montpelier-road, Brighton, the wife of T. Jenner Verrall, M.R.C.S., L.R.C.P., of a son.

WALL.—On Dec. 17th, at Porchester-square, wife of J. B. Wall, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

LAMB—SYMES.—At the Church of the Holy Cross, Crediton, Devon, on Dec. 14th, by the Rev. Prebendary Felton Smith, vicar of Crediton, James Henry Lamb, M.B. and C.M., of Crewkerne, Somerset, son of J. H. Lamb, The Latch, Brechin, N.B., to Ethel Mary, eldest daughter of the late William Henry Symes, the Manor House, Crediton.

TYSON—WITHERINGTON.—On Dec. 15th, at St. Andrew's Church, Sonning, Wilson Tyson, M.B. Cantab., of The Beeches, Lowestoft, to Maud, second daughter of Iltid Evans Witherington, of Aberlash, Sonning.

DEATHS.

HARE.—On Dec. 15th, at Berkeley House, Manchester-square, W., in his 81st year, Charles John Hare, M.D. Cantab., F.R.C.P.

MUNK.—On Dec. 20th, at Finsbury-square, William Munk, M.D., F.R.C.P., F.S.A., in his 83rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M., Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M., Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.), Cancer (2 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (31st).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

***Lectures, original articles, and reports should be written on one side of the paper only,* AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.**

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

THE CUNEO GIANT.

"NATURE brings not back the mastodon," says Tennyson, and human giants since the semi-mythical days of Theseus who (according to Plutarch) did so much to destroy the breed do not tend to reproduce themselves; in fact, King Frederick the Great's father whose passion for colossal grenadiers Macaulay ridicules so effectively would find it hard to get together a company, much less a regiment, of recruits 7 ft. high. Year by year the armies of southern Europe especially experience greater difficulty in reinforcing the line with youths of the proper stature and thoracic girth, and in Italy the "gracilità

crescente" (increasing slenderness) seems, according to her military authorities, coincident with an unexpected loss of height. In these circumstances the appearance of a veritable giant in the subalpine town of Cuneo is a phenomenon deserving of more than vulgar curiosity. This overgrown individual is a native of the Piedmontese hamlet of Vinadio where he was born twenty-two years ago. His altitude is (in metres) 2·25, his thoracic circumference is 1·60, and his feet are 45 centimetres long. He had to return from France the other day to present himself to the military authorities of this district who, finding it difficult to enrol him in the levy, keep him under observation at the hospital of Savigliano. His slow elephantine movements seemed to unfit him for active service; not a bed in the barracks was big enough for him; if he had to mount guard no sentry-box, in the event of a shower, could admit him. His railway journeys had to be performed in a cattle-truck, and he had to be brought round to the train by an entrance outside the station which had no wicket wide enough to let him through. What the poor fellow's occupation in life is to be is a grave problem to his relatives and friends. Mobbed wherever he appears in public he will be constrained to keep in doors—possibly to earn his livelihood by receiving visitors at so much a head. It will be as respectable a "profession" as that of his compatriot Succi, the fasting-man, who makes his bread by refusing to eat it!

WHAT IS LEGITIMATE ENTERPRISE AND WHAT IS "STEALING A MARCH"?

To the Editors of THE LANCET.

SIRS,—I wish to ask your views on a subject of some importance to myself. I live in a small town just outside what may be called the suburbs of London. In one direction the town has spread to a railway station beyond which lies a village. Here recent building has taken place so that the village and the town form practically one residential neighbourhood. At the junction lives a medical man concerning whose attitude towards me I am seeking advice. I have patients in the village and this spring I hired rooms from a chemist residing there and made arrangements to attend my patients at these rooms on certain days at certain hours to their obvious convenience and mine. One day I received a letter from the medical man who lives at the junction saying that he had "ascertained out of curiosity the opinion of the *British Medical Journal* on my recent step" and to my great surprise I found my conduct pilloried in that journal as "savouring strongly of touting, advertising, and stealing a march on a professional brother." Knowing that I had been guilty of none of these things I wrote for a copy of the letter which had betrayed the editor of the *British Medical Journal* into such vilification of me. On this being supplied to me I at once found that the *British Medical Journal* had been inaccurately briefed. I wrote to the *British Medical Journal* repudiating the conclusions that had been drawn and that paper with great courtesy said, "We willingly give publicity to this repudiation and take the opportunity of stating that our reply was not intended to have any individual application." In spite of this I am informed that a use has been made of the first opinion of the *British Medical Journal*—a use designed to prejudice me in the eyes of the medical profession and in my business connexions. Will you kindly advise me what steps, if any, I should take? The consulting-room in the village was started entirely for the convenience of patients who were already my patients. It was in no sense a branch practice, for it was not worked by an assistant but by myself as a *bonâ fide* development of my practice. I may add that the unfriendly action of my "professional brother" has done me no harm, but I naturally desire to stop further misrepresentation of my conduct.

If you would like the letters and newspaper cuttings respecting the whole matter I shall be pleased to let you have them.

I am, Sirs, yours faithfully,

Dec. 12th, 1898. E. J. D. M.

*** We have received the letters and newspaper cuttings. The *British Medical Journal* has expressly repudiated any intention of applying to "E. J. D. M.'s" individual conduct the offensive criticisms in question. To make use, therefore, of the earlier note, written before "E. J. D. M.'s" explanation reached our contemporary, is to commit the exact offence which the *British Medical Journal* has pilloried—it is "to steal a march on a professional brother" by representing him wrongly as a tout and an advertiser. We are asked by "E. J. D. M." to advise him about any steps he should take. As he admits that he has suffered no harm in his practice we advise him to take no steps at all.—ED. L.

MEDICAL JOURNALISM IN MARYLAND.

AT the semi-annual meeting of the Medical and Chirurgical Faculty of Maryland held at Frederick on Nov. 16th, 1898, Dr. Horace M. Simmons of Baltimore, manager of the *Maryland Medical Journal*, read a paper entitled "Medical Journalism in Maryland." Medical journalism in that State dates, he said, from the month of April, 1808, when Dr. Tobias Watkins established in Baltimore the third medical journal edited and published in the United States. It was called the *Baltimore Medical and Surgical Recorder*. The founder is said to have been a man of ability and culture. His journal was announced as a quarterly and the first number contained eighty pages of printed matter, embracing original papers, extracts, selections, miscellany, reviews, and correspondence. It was ably conducted, but the editor acknowledged in the preface to his second year's volume that he had been disappointed of the coöperation and patronage which he expected and the paper came to an end in 1809. A period of two years then elapsed, at the end of which the *Baltimore Medical and Philosophical Lycaeum* made its appearance under the direction of Dr. Nathaniel Potter, professor in the College of Medicine of Maryland. It was published quarterly at $2 per annum, but was discontinued after the fourth number. Following the suspension of the *Lycaeum* there was an interval of eleven years, when the *Baltimore Philosophical Journal and Review* appeared under the editorship of Dr. John B. Davidge, professor of anatomy in the University of Maryland. It contained 200 pages of well-arranged original and selected matter, but did not get beyond the initial number. The next venture was the *Maryland Medical Recorder* which was established in 1829 by Dr. Horatio G. Jameson, professor of surgery in the Washington Medical College. It only reached the third volume. In February, 1830, prior to the suspension of the *Recorder*, a rival periodical appeared under the name of the *Baltimore Monthly Journal*, edited by Dr. Nathan R. Smith, professor of surgery in the University of Maryland. The subscription price of this monthly was $3 per year if paid in advance or $4 if paid at the end of the year. Dr. Smith contributed most of the matter to the journal and was assisted in his editorial duties by an association of physicians and surgeons. This venture did not long survive. In the year 1833 another association of physicians and surgeons, in coöperation with Dr. E. Geddings, professor of anatomy and physiology in the University of Maryland, established the *Baltimore Medical and Surgical Journal and Review*, published semi-annually. The suspension of the *Review* in 1834 occasioned so much regret on the part of the profession that the editor concluded to resume publication under the monthly form and with the name of the *North American Archives of Medical and Surgical Sciences*, but this renewed effort was terminated after one year's experience. Under the auspices of the Medical and Chirurgical Faculty of Maryland an official organ of the Medical Department of the United States army and navy was started in 1839 as the *Maryland Medical and Surgical Journal*. It was at first edited by a committee of six, but subsequently by Dr. G. C. M. Roberts and Dr. Samuel Chew. The journal was a marked improvement over all previous attempts, but in March, 1843, it ceased to exist. Maryland was now left without a professional journal for a period of seventeen years when, in January, 1860, the *Virginia Medical Monthly* changed its name to the *Maryland and Virginia Medical Monthly* and entered upon a new series. The office of publication was in Richmond. The troubles growing out of the civil war caused the early suspension of the journal. In January, 1861, Dr. Edward Warren, professor of materia medica and therapeutics in the University of Maryland, established the *Baltimore Journal of Medicine*. In consequence of the civil war Dr. Warren gave up the publication and went home to the south, but after the war he returned to Baltimore and established the *Medical Bulletin*, a semi-monthly journal of medicine and surgery. In 1870 this periodical having reached volume ii. was united with the *Baltimore Medical Journal* under the name of the *Baltimore Medical Journal and Bulletin*. The *Baltimore Medical Journal* had been started the same year by Dr. E. Lloyd Howard and Dr. T. S. Latimer. No. 10 of volume ii. was the last of the consolidated publications to appear. The College of Physicians and Surgeons in 1872 began the publication of the *Physician and Surgeon* which was afterwards changed to the *Baltimore Physician and Surgeon*. Volume vi., No. 5, marked the date of its demise. In May, 1877, the *Maryland Medical Journal* was brought out under the editorial and business direction of Dr. H. R. T. Manning and Dr. T. A. Ashby. Originally a monthly it was changed to a semi-monthly in May, 1880, and to a weekly when it reached volume x. The property was purchased in 1894 from Mr. William R. Ashby by the present owners who constitute an incorporated company. Since the date of the founding of this journal there have appeared and disappeared the *Independent Practitioner*, the *Baltimore Medical and Surgical Record*, and the *Medical Chronicle*. Dr. Simmons's paper is printed in the *Maryland Medical Journal* for Dec. 3rd, 1898, where it forms the opening article.

THE EXCRETION OF HIPPURIC ACID IN THE URINE.

IN the *Gazzetta degli Ospedali* of Dec. 4th Dr. A. Sertoli describes observations which he has made on the effect of disease of the kidney in the excretion of hippuric acid. For the estimation of hippuric acid in the urine he prefers Völcker's process which, although it requires considerable time, has the advantage of comparative accuracy. A sample of the twenty-four hours' urine measuring from 200 c.c. to 300 c.c. is evaporated to one-third in the water-bath, then mixed with 4 grammes of sodium phosphate and evaporated to a syrupy consistence, after which dry calcium sulphate is added and the whole well dried at from 80° to 90° C. The residue is then extracted with from 50 c.c. to 60 c.c. petroleum ether in a Soxhlet apparatus, the receiver of which is kept at 70° C. so that a continuous supply of condensed ether may pass through the percolator. In four or five hours the phenol, benzoic acid, and fatty acids are removed, after which the hippuric acid is extracted by percolating similarly with sulphuric ether for a period of from six to ten hours, and after crystallisation from the ether can either be weighed or estimated with decinormal caustic soda. Observations made on himself and continued for six days showed that his maximum ordinary excretion of hippuric acid was 0·88 gramme daily and the minimum 0·35 gramme, the average being 0·64 gramme. He then took increasing quantities of

benzoic acid on each of five consecutive days, at the same time estimating the hippuric acid excreted. The results were as follows:—First day: benzoic acid taken, 1 gramme; hippuric acid in urine, 0·88 gramme. Second day: benzoic acid taken, 2 grammes; hippuric acid in urine, 2·22 grammes. Third day: benzoic acid taken, 3 grammes; hippuric acid in urine, 2·91 grammes. Fourth day: benzoic acid taken, 4 grammes; hippuric acid in urine, 3·75 grammes. Fifth day: benzoic acid taken, 5 grammes; hippuric acid in urine, 4·51 grammes. Dr. Sertoli then made analogous experiments with 3 cases of chronic parenchymatous nephritis, 2 of chronic interstitial nephritis, and 1 of pyelitis, and he came to the conclusion that the elimination of hippuric acid is not affected to any important extent by the pathological condition. He is therefore of opinion that in the human subject the kidney is not the organ primarily concerned in the formation of hippuric acid.

PROFESSIONAL CONFIDENCE.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged by your inserting in your next issue a reply to the following questions. What should I do under the circumstances I am about to relate? A is a patient of mine and B is his agent, in whose office is C as a clerk. D is a bailiff employed by A. B and D are also patients of mine but C is not. C writes me a letter marked on the outside *Private* and on the inside *Confidential* saying "B was pressed for time so asked me to write you as to what you thought about D's case and what the upshot would be," signing it in his own name only. Am I justified in giving C or even B this information? Thanking you in anticipation,

I am, Sirs, yours faithfully,

Dec. 13th, 1898. X.

*** Of course our correspondent must respect D's confidence entirely. He must say nothing to B, C, or any other person concerning D's health which he has gathered in a professional way without D's express permission, and he will be wise, if that can be obtained, to have it in writing.—ED. L.

THE UNQUALIFIED PRACTITIONER AGAIN.

AN inquest was held recently at Wrexham upon the body of a child, aged five years, who died on the way to the Wrexham Infirmary from the results of burns. The child was burned some days before her death and was attended until the day of death by a man named William Henry Howard, a contractor at the Brymbo-street works. At the inquest Howard is reported as saying that he had attended thousands of burning cases and thought himself as good at the job as any medical man in North Wales. The coroner warned him that he might one day find himself committed for manslaughter, to which Howard replied, "If a doctor sends for me I cannot refuse to attend." The coroner, "You seem to me to be a mass of conceit. You are running a very grave risk indeed in attending these cases up and down the country and charging half-a-crown a visit." The inquiry was adjourned for the attendance of the infirmary surgeon.

"LUNATICK ASYLUMS."

WE have received a small pamphlet bearing the above title. The sub-title is "An Essay by a Doctor of Arts, Oxford." The degree is one we are not familiar with, and if conferred by any university it is certainly not so by the University of Oxford as would seem to be implied. The writer's argument would seem to be shortly that (1) asylums are too palatial and luxurious; (2) that weak-minded persons should be treated in separate establishments, however small and homely; (3) that there should be no private madhouses; (4) that asylums are conducted on the lines made familiar to us by such works as "Valentine Vox" and "Hard Cash"; and (5) that "into these establishments the young and unfortunate are trepanned—magisterial warrants not even solicited— ....." That the "overwrought" should be tended in a home something resembling the best kind of almshouse is an idea with which we can all agree, but that the modern lunatic asylum is anything like the institution which a "Doctor of Arts" describes or that Lunacy Commissioners neglect their duty, as he implies, is absurd.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—A curious error appears to have crept into the report of Koch's lecture given in THE LANCET of July 2nd. It is there stated that "the mosquitoes probably deposit their eggs on the human body, the parasites issue from these eggs and when their number has increased the disease develops." Koch's suggestion is otherwise. It is that the parasite is passed on through the eggs and larvæ to the imago which is the active agent for disseminating the disease. The exact words, taken from the authorised translation of the lecture, are: "The mosquito receives the parasites, transmits them to its eggs and the young larvæ, and only the next generation is able again to infect with malarial parasites. Nor does it seem to me impossible that the parasites maintain themselves in the mosquitoes through several generations."

I am, Sirs, yours faithfully,

Dec. 20th, 1898. C. H. E.

THE "CALTON" STYLOGRAPHIC PEN.

ONE of these pens has been sent to us for use and has given every satisfaction. We have found it simple in working and easy to write with. It is supplied by the Jewel Pen Company, 56, Fenchurch-street, E.C.

THE "INSTRA WARMER."

WE have received from Messrs. Blair and Co., of 47, Cannon-street, E.C., one of their Instra Warmers which was referred to under the title of the "Sun Pocket Stove" in THE LANCET of Nov. 28th, 1896. There is apparently no difference in the construction of the "Warmer" now before us and the one which we previously noticed. No doubt in many cases, especially in travelling, this handy little contrivance, easily carried in any pocket, being about 4½ in. by 2 in. by 1¼ in., would be a boon on cold days; and to those who are constitutionally troubled with cold hands it appears to provide a solution of the difficulty experienced in meeting their requirements. The heat is obtained by the slow combustion of a carbon rod placed inside a metal case and each rod lasts for about four hours.

THE "LIBERATOR" FUND.

EVERYONE will remember Thackeray's masterly description of the arch-swindler Brough in the "Great Hoggarty Diamond" and how the fall of the Great Diddlesex Association brought misery upon thousands of small shareholders. The Liberator *fiasco* was upon exactly the same lines even to the unctuous piety and scoundrelism of the chief actors. It will be remembered that a fund was got up for the relief of the sufferers by the collapse of Jabez Balfour. Although £82,000 have been distributed some £18,000 are still required. In the appeal issued by Mr. Stockwell Watts it is sad to see the smallness of the amounts lost for it shows the humble circumstances of most of the victims. Hardly anyone seems to have lost more than £500. It is a truism to say that Christmas is above all others the season for charity, but the Liberator Fund is a most worthy one to help and those who can spare anything towards it may feel assured that their moneys will be only distributed to the really deserving.

A COMMON AILMENT.

A SANITARY engineer living in a Kentish village not far from London sends us the following amusing description of local feeling in the district concerning their water-supply: "Our village water-supply—the spoilt child of our parish council—is suffering from a very common ailment—*neglect*—which may develop into a serious attack of typhoid or other preventable disease. Its grandmother and mother ('Spiritual Scientists'), its godmothers and its aunts ('Peculiar People'), are terribly indignant to think that their only child should be taken from them and placed under the charge of the rural district council just because they refused to apply the simple common-sense remedies prescribed by the medical officer of health. Public sympathy is requested."

R. L. S.—We never recommend individual practitioners. Our correspondent must consult his own medical man.

Ignarus.—There is no breach of etiquette in the proposed addition under the circumstances described.

Mr. L. Weiss.—We do not recommend individual practitioners, whether specialists or not.

Colonial will find full information in the current Medical Directory p. 20.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 22nd, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 16	30·28	S.W.	...	56	55	41	41	43	Foggy
,, 17	30·25	S.W.	...	56	56	43	51	52	Overcast
,, 18	30·27	S.W.	...	72	57	52	52	54	Cloudy
,, 19	30·09	N.W.	...	64	49	48	47	49	Cloudy
,, 20	30·37	N.W.	...	53	44	36	36	38	Cloudy
,, 21	30·38	N.E.	0·02	44	44	39	42	43	Overcast
,, 22	30·47	S.	...	46	44	36	36	37	Foggy

During the week marked copies of the following newspapers have been received: *Beverley Guardian, East Essex Times, Bury Free Press, Lynn News, Leek Times, Batley News, Dundee Advertiser, Glasgow Herald, South Wales Daily News, Sheffield Telegraph, South Africa, Times of India, Pioneer Mail, Cambridge Express, Grimsby Observer, Boston Independent, Scotsman, Architect, Liverpool Daily Post, East Anglian Daily Times, Newcastle Chronicle, Builder, Bristol Mercury, Sussex Daily News, Citizen, Thame Gazette, Yorkshire Post, Hereford Times, Driffield Observer, Manchester Guardian, Birmingham Post, Daily Mail, Temperance Chronicle, Leeds Mercury, Brighton Gazette, Sanitary Record, Local Government Chronicle, Hertfordshire Mercury, London Morning, Reading Mercury, Mining Journal, City Press, Health, Literary Digest, Lancashire Express, Kent and Sussex Courier, Local Government Journal, Oxford Times, Beckenham Journal, Rugby Advertiser, Surrey Advertiser, Northwich Chronicle, Folkestone Herald, Dover Express, Civil Service Gazette, Glasgow Daily Record, Horwich Chronicle, Berbice Gazette, &c., &c*

Communications, Letters, &c., have been received from—

A.—Dr. J. Althaus, Lond.; Dr. A. B. Avarne, Blaenavon; Dr. F. C. Abbott, Lond.; Messrs. Gordon Alexander and Co., Lond.; Messrs. Allen and Hanburys, Lond.; Aerators, Ltd., Lond.

B.—Sir William H. Broadbent, Lond.; Dr. J. L. Bunch, Lond.; Mr. J. Beattie, Durham; Mr. W. H. Bennett, Lond.; Mr. J. P. Bush, Bristol; Mr. C. Braine-Hartnell, Cheltenham; Mr. Chas. Black, Sheffield; Dr. R. Barnes, Liss; Mr. R. E. Wormald Brewer, Newport; Mr. J. R. de C. Boscawen, Truro; Dr. F. L. Benham, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; T. B. Browne, Ltd., Lond.; Mr. P. F. Barton, Cambridge; Mons. M. Boulenger, Brussels; Messrs. W. F. Brown and Co., Montreal; Birmingham General Hospital, House Governor of; Messrs. C. Barker and Son, Lond.; Mr. C. Bryant, Lond.; Mr. F. E. Bennett, Lond.; Birmingham City Asylum, Medical Superintendent of; Messrs. J. H. Booty and Son, Lond.; Messrs. Blackwood, Edinburgh.

C.—Mr. L. E. Creasy, Lond.; Mr. E. Carpwall, Liverpool; Canterbury Theatre, Directors of; Cortland Wagon Co., Lond.; Messrs. A. H. Cox and Co., Brighton; Dr. C. W. J. Chepmell, Brighton; Mr. H. Cripps, Lond.; Messrs. Cassell and Co., Lond.; Mr. T. Cooke, Lond.; Messrs. Crossley, Moir, and Co., Lond.; Mr. R. Cuffe, Woodhall Spa; Mr. J. B. Cameron, Lond.; Mr. H. G. Cook, Cardiff; Mr. E. A. Cazalet, Lond.

D.—Dr. Dragneff, Stara-Zagora, Bulgaria; Derbyshire Royal Infirmary, Secretary of; Messrs. Duncan, Flockhart, and Co., Edinburgh; Messrs. Davies and Co., Lond.; Dr. T. W. Dewar, Dunblane; Mr. F. Deas, Merton; Mr. E. P. Dawson, Leyton; Devoniensis; Dartford Joint Hospital, Clerk of Committee of.

E.—Mr. McA. Eccles, Lond.; Dr. W. Ewart, Lond.; E. M. C.; Mr. C. H. Eyles, British Honduras; *Evening Argus*, Brighton.

F.—Dr. A. Foxwell, Birmingham; Messrs. J. S. Fry and Sons, Bristol; Fromms Extract Co., Lond.; Mr. W. W. Farnfield, Lond.; Mr. N. Hay Forbes, Tunbridge Wells; Figure Improving Soap Co., Lond.

G.—Staff-Surgeon Gipps, Arosa, Switzerland; Dr. J. F. Goodhart, Lond.; Mr. H. E. Girdlestone; Bournemouth, W.; Dr. F. W. Garrard, Starbeck; Messrs. C. Griffin and Co., Lond.

H.—Dr. W. Conyers Herring, Paris; Mr. G. F. Hilcken, Lond.; Mr. Hawkins-Ambler, Liverpool; Humphreys, Ltd., Lond.; Messrs. T. W. Holmes and Co., Newcastle-on-Tyne; H. P. G.; Huddersfield Corporation, Medical Officer of Health of; Dr. T. W. Hime, Bradford; Mr. P. H. Harmer, Hadlow Down; Dr. M. Heiman, Syracuse, U.S.A.; Mr. C. B. Howse, Lond.

J.—Mr. R. Jones, Liverpool; J. M. C. McA.

K.—Dr. H. Kenwood, Lond.; Kronthal Co., Lond.; Messrs. Keith and Co., Edinburgh; Kaputine.

L.—Dr. T. G. Lyon, Lond.; Dr. P. R. Langdon-Down, Hampton Wick; L. N. B.; Leeds General Infirmary, Manager of; Liverpool Northern Hospital, Secretary of; Messrs. Longmans, Green, and Co., Lond.

M.—Dr. C. D. Musgrove, Penarth; Dr. W. Milligan, Manchester; Mr. C. C. Murison, Lond.; Mr. R. Montgomery, Dublin; Dr. W. Moxon, Matlock; Messrs. J. Maythorn and Son, Biggleswade; Messrs. Manlove, Alliott, and Co., Nottingham; Dr. R. J. Marshall, Bombay; Mena House Hotel, Pyramids, Egypt; Messrs. Maple and Co., Lond.; Messrs. Morrison, Ingram, and Co., Manchester; Dr. G. H. Mapleton, Goudhurst; Mr. H. McLaren, Govan; *Medical Magazine*, Lond., Manager of; Messrs. C. Mitchell and Co., Lond.; Mr. C. D. Morris, Feltham.

N.—Mr. W. J. Nicholls, Oxford; Norfolk and Norwich Hospital, Norwich, Secretary of.

P.—Mr. J. B. Pike, Loughborough; Messrs. H. Potts and Co., Lond.; Price's Patent Candle Co., Lond.; Mr. Y. J. Pentland, Edinburgh; Rev. W. M. Phillip, Aberdeen; Dr. J. I. Parsons, Lond.; Dr. R. Pearson, Lond.; Dr. B. Pitts, Lond.

R.—Dr. H. D. Rolleston, Lond.; Royal London Ophthalmic Hospital, Secretary of; Miss B. M. Reynolds, St. Leonards-on-Sea; Royal Southern Hospital, Liverpool, Senior House Surgeon; Royal United Hospital, Bath; Dr. R. L. Roberts, Ruabon; Messrs. Robertson and Scott, Edinburgh; Mr. E. J. Reid, Lond.; Royal Meteorological Society, Assistant Secretary of; Dr. E. B. Reckitt, Boston.

S.—Dr. Gordon Sharp, Lond.; Dr. D. D. Stewart, Philadelphia; Dr. J. A. Samuel, Torpoint; S. H. W.; Messrs. Street and Co., Lond.; Messrs. Stubbs, Lond.; Sunderland Infirmary, Secretary of; Messrs. W. H. Smith and Sons, Manchester; Mr. A. M. Sheild, Lond.; Mr. F. J. Smith, Lond.; Mr. A. Strauss-Collin, Lond.; Mr. G. Smith, Plymouth; Mr. H. Silverlock, Lond.

T.—Dr. J. A. Thwaites, Johannesburg; Dr. Turck, Chicago.

U.—University of Edinburgh, Registrar of.

V.—Mr. R. Vitali, Lond.; *Veterinary Journal*, Portobello, Editor of.

W.—Dr. J. Wallace, Greenock; Mr. F. W. Walton, Lond.; Wills, Ltd., Lond.; Western Ophthalmic Hospital, Lond., Secretary of; Messrs. Wilson and Son, Lond.; Mr. H. E. Wood, Lond.

Z.—Dr. T. Zangger, Zurich.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. R. Anderson, Fern Hill; A. W. H.; Messrs. Allen and Garner, Lond.

B.—Mr. G. Billing, Blackpool; Mr. J. Bond, Leicester; Mr. H. H. Bate, Biddenden; Mrs. E. A. Blackmore, Lond.; Miss Barratt, Holmrook; Dr. L. S. Beale, Weybridge.

C.—Mr. F. W. Clarke, Chorlton-cum-Hardy; C. J. A. C.; Messrs. Samson Clark and Co., Lond.; C. D. F. B.; Mr. J. B. Cox, King's Lynn; Mr. C. Cleverley, Churchdown; Mrs. A. M. Campbell, Lond.; Mr. J. M. Carvell, Catford; Mr. P. R. Cresswell, Dowlais; Messrs. J. A. Carveth and Co., Toronto, Canada.

D.—Mr. G. A. Davies, Newport; Mons. R. Ducretet, Paris; Mr. A. H. Dodd, West Brighton; C. Dewynter, Ltd., Lond.

E.—E., Southampton.

F.—Mr. H. K. Fox, Cork; Fairbairn, Ltd., Edinburgh.

G.—Galignani Library, Paris; Dr. T. Greer, Belfast.

H.—Mr. A. G. R. Harris, Shrewsbury; Dr. H.; Mr. A. S. Hanson, Titchfield; Dr. W. B. Home, H.M.S. *Tamar*, Hong Kong; Howard, Southport; H. C. W. J.; H. J. R.; Messrs. Hill and Hoggan, Glasgow; Mr. J. Heywood, Manchester.

J.—Mr. G. James, Tenby; J. H.

K.—Kington Union, Clerk of; Dr. K.

L.—Mr. J. Lee, Belfast; Mons. H. Le Soudier, Paris; Messrs. Lamb and Scott, Brechin.

M.—Mr. D. Morgan, Ynysybwl; Mr. T. K. Mulcahy, Limerick; Messrs. Macmillan and Co., Lond.; Miss Millar, Newton Abbott; Mr. H. Mackey, Old Hill; Mr. J. Muir, Paisley; Dr. H. T. Merrick, Surbiton; Mr. J. A. H. Mogg, Feckenham; Dr. A. G. Macdonald, Chorley; Messrs. Macara Bros., Glasgow; M.D., London; Mr. S. Mackey, Newcastle; Mr. W. A. Mushé, Lond.; Dr. E. M. Madden, Bromley.

P.—Dr. R. W. C. Pierce, Llandudno; Mr. W. Perry, Pontyclun; Mr. C. J. Perrott, Bristol.

R.—Mr. R. W. Roberts, Port Talbot; R. R. D.; Registered Nurses' Society, Lond., Secretary of; Dr. Rojo, Buenos Ayres.

S.—Mr. J. Sampson, York; Mr. H. W. Scriven, Lond.; Mr. E. Swindells, Torcross; Mr. G. H. Sieveking, Hamburg; Dr. Spence, Lichfield.

T.—Dr. R. Turner, Eastwood; T. Y. S.

W.—Dr. J. W. White, Glasgow; Mr. E. H. Woodman, Birmingham; W. C.; Messrs. W. and F. Walker, Liverpool; Worcester County Council, Clerk of; Dr. T. Whitelaw, Portobello.

Y.—Mr. W. Young, Glasgow.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION. POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.